JUNE, 1952

Industrial FINISHING

Published Monthly in the Interest of Product Cleaning and Painting by Product Publications, Inc., 1142 N. Meridian Street, Indianapolis 4, Ind.

ON

O'SHELAC'S
40th Birthday

We are pleased to present . . .

XL
O'SHELAC

O'SHELAC is now 40 years old . . . . and more popular than ever. The modern 1952 version (XL) is a remarkably tough, durable foundation coat under lacquer or varnish. XL is excellent under "hot" lacquer. Also an excellent drawer coater. Try XL-O'SHELAC today.

Advance PAINT COMPANY
Indianapolis Indiana
MANUFACTURERS OF INDUSTRIAL FINISHES

TO GIVE YOUR PRODUCT A GOOD START, GIVE IT AN INTERCHEMICAL FINISH!

Undercoats . . . Varnishes . . . Lacquers . . .
Enamels for Metal . . . Plastic . . . Wood

AULT & WIBORG, MURPHY, ROXALIN, AND IC ARE TRADEMARKS OF INTERCHEMICAL CORPORATION

IN CANADA, SIMILAR PRODUCTS ARE MADE AND SOLD BY AULCRAFT PAINTS LIMITED, TORONTO, UNDER THE TRADE NAME "AULCRAFT PAINTS".

NEW RESEARCH PRODUCTS FOR

METAL FINISHING

STRIP ANODIC COATINGS ON ALUMINUM AT ROOM TEMPERATURE

ENTHONE COMPOUND 89 is an alkaline material that strips anodic coatings on aluminum at room temperature. Simply immerse anodizing racks or defective work in cold solution of Compound 89 for 15 seconds to strip oxide coatings. No chromates present to contaminate anodizing solution. Can be put in steel tank or crock.

PHOSPHATE AND CLEAN IN ONE OPERATION

ENTHONE COMPOUND 39 is a new product for *rapid* cleaning and phosphating. Adherent phosphate coatings are formed in from 15 seconds to 1 minute through a wide temperature range. Cuts cost, rejects and labor for preparing steel and zinc for painting or enameling. A simple test will prove to you that phosphating of oily work can be done in one tank. Material cost of phosphating is less than ½¢ per square foot.

APPLY CHROMATE COATINGS TO ZINC AND CADMIUM AT LOW COST

"ENTHOX" CHROMATING PROCESS is a new simple procedure for chromate coating of zinc and cadmium. Use only 1 oz./gal. of material and chromate troublefree even in fully automatic cycles. Solution costs 4¢ per gallon to make. Coatings can be dyed various shades of color including black and red. Meets U. S. Army Specifications 57-0-2C and 51-70-1A.

Write for bulletins on these processes and a check list of literature on sixty products for modern metal finishing.

METAL FINISHING PROCESSES

ENTHONE
INCORPORATED
442 ELM STREET
NEW HAVEN, CONNECTICUT

ELECTROPLATING CHEMICALS

Tweed finish for UNAGUSTA Modern offers an Anniversary *Plus*

Finish **...a part of saleability**

There are plus features of design and construction that add to the saleability of this mahogany Anniversary group by Unagusta. The finish was specially created in our studio to become an important part of the design. Our technicians work closely with the manufacturer to develop the beauty of the finish by enhancing the character and tone of the woods.
From experience and research they add toughness to protect this beauty against rings, cracks, or fading. Then, they must combine these features into a finish that is practical in production.
The result is an individual finish that is an inherent part of value . . . plus saleability.

We invite inquiries from manufacturers who are interested in finishes that are custom created for individual production requirements, and maximum saleability of the finished product.

The better the Finish, the better the Buy

GRAND RAPIDS VARNISH CORPORATION

Makers of the Famous Guardsman Finish and Guardsman Cleaning Polish

GRAND RAPIDS, MICHIGAN

JUNE, 1952
Vol. XXVIII, No. 8

CCA

A monthly magazine for finishing room and paint shop foremen, production superintendents, chemists, purchasing agents and company executives of industrial plants where product surface cleaning and finishing are major operations in the manufacture of parts and products.

Industrial FINISHING

W. H. ROHR, Editor P. C. BARDIN, Associate Editor

Contents

Random Comment on the Industrial Scene 4
Transfer of Wood Grain to Sheet Metal 26
Custom Finishing Shop 37
Baked Clear Coat Protects Chrome-Plated Auto Parts 44
The Starck Piano Finish 56
Pigmented Toners Used to Produce Light Finishes 64
Production Finishing of Electrical Equipment 70
Letters from Readers 76
Questions and Answers 90
Materials; Supplies; Equipment 98
Booklets; Circulars; Catalogs 114
Editorial 118
Classified Advertising 128
Advertisers Index 132

Hercules Assignment 33
W. T. Utley Retires from Ditzler Divn. of P.P.G. 33
DuPont Man in N.C. 41
Metals Disintegrating Appoints Knolke Sales Representative 50
H. E. Druce is I.S.R. for DuPont in Tennessee 52
Dolan to Visit European Paint Associations 52
Hercules New Chemical Plant 52
Michigan Oven Appoints Man for Indianapolis 74
Kirk & Blum Honors Its Long Time Employees 74
Andrew Brown Co. Appoints Dist. Managers, Reps. 86
W.R.Hebert Represents Coast Paint & Lacquer Co. 86
H.V.Walker Co. Plant New Part of Aula Chemicals 86
P.P.G. Co.'s New Brush Plant 96
DuPont Representative in Birmingham 96
J. Holland & Sons Expands Plant 120
Michigan Oven Co. Moves Office 122
G. L. Kittle Returns to Fred'k A. Stresen-Reuter 126
Gittins Joins DuPont 126
FPRS Holds Sixth Annual Meeting 126
Pocket Slide Rule 126
Binks Relocates in Cleveland 126
Demands for Die-Cut Masking Doubled 127
Topper Equipment Co. Builds Another Plant 127
DeVilbiss Spray Painting School Moves to West Coast 127

Acceptance under Section 34.64, P. L. & R., authorized

Published
the 18th of each month by
PRACTICAL PUBLICATIONS
Incorporated
1142 N. Meridian St.
Indianapolis 4, Ind.
Telephone PLaza 6771

President ..... W. H. Rohr
Vice-President ..... E. A. Dosch
Sec.-Treas. ..... R. E. Salts

Eastern Representative:
C. A. LARSON
254 West 31st St.
New York 1, N. Y.
Phone: Longacre 4-4235
4-4236

West Coast Representatives:
SIMPSON-REILLY LTD.
Halliburton Building,
Los Angeles 17, Calif.
Telephone: Dunkirk 8-1179
814 Central Tower
San Francisco 3, Calif.
Telephone: Douglas 2-4994

Subscription Rates Per Year
U. S. and Possessions $3.00
Canada and Foreign Countries $5.00

28 TWENTY-EIGHTH YEAR OF PUBLICATION

Air Temp. Just Right. A new advance in room air conditioning is announced by York Corp., York, Penna. Modulation control is a dependable system-capacity adjusting-device for automatically preventing a room air conditioner from over-cooling when outdoor temperatures drop.

Whenever outside temperature drops, the control automatically reduces the amount of cooling without changing ventilation or air circulation. Should outside temperature rise, the control then increases cooling until the predetermined comfort level is attained.

* * *

Mahogany. The Federal Trade Commission has extended an invitation to all interested persons and representatives of groups and organizations to attend and take part in public hearing to be held under the Commission's auspices on the subject of proper use of the word "Mahogany" in descriptive designations and representations of wood and wood products. The hearing will be convened at 10 a.m., June 30, 1952, in Room 332 Federal Trade Commission Building, Washington, D.C.

* * *

Metal Cleaning Agent. A new method is announced for cleaning cast iron, steel flanges, nickel pipe, and other miscellaneous fittings and chemical equipment for salvaging purposes. It is called the Virgo molten cleaner, and consists of immersing the metal parts in a molten salt bath maintained at 850° F., a water quench tank, and an acid dip tank. The cleaning agent does not attack the base metal. Obviously this method is much more rapid than hand cleaning.

* * *

Checkerboard Plywood. Announcement is made of a new hardwood plywood 48 in. by 96 in., 5-ply construction. The checkerboard effect is achieved by using 16-in. squares of dark African ribbon stripe mahogany and lighter korina. The grain of each square is set at right angle to the next to form the checkerboard.

It is adapted for use as wall paneling, displays and furniture.

* * *

Dehumidifier. Have you an area where high humidity dampness is a problem? A dehumidifier has been developed which may be plugged in on an ordinary 110-volt line, and it requires no drain pipe connections. It will maintain precise humidity control down to levels as low as 15% in temperatures from 40° F. below zero to 100° F.

The unit works in cycles; dries for 2½ hours, and then vaporizes the absorbed moistures for 30 minutes, all automatically. A time-delay-action makes sure the desiccant is thoroughly dehydrated and cooled before the de-

TINTONE

From the Start Consider the Finish

For the clearest—richest most beautiful FINISH consider starting with DOLAN'S newest development in

WOOD FILLER

TINTONE

FILLER is the foundation for a perfect FINISH.

TINTONE provides a clear, clean transparent color, free from spotting, greying or hazing. It wipes easily—fills perfectly—reduces puffing and shrinking.

Final rubbing is minimized because of the smooth level surface provided by **TINTONE FILLER.**

Available in all shades of mahogany, Walnut and Blonde FINISH.

V. J. DOLAN & COMPANY, INC.

"Unquestionable Quality"

INDUSTRIAL FINISHES

1830 N. Laramie Avenue Chicago 39, Illinois

BErkshire 7-0100

Form-A-Roc • *FIRST COAT*

FOUNDATION FOR FINE FINISH

1. Dries with lacquer speed.
2. Has double lacquer solids at spray gun.
3. Fills very well—sands easily.
4. Adheres tenaciously to steel, wood, presdwood, aluminum, galvanized metal, etc.
5. Holds out lacquer, synthetic or oleoresinous enamels exceptionally well.
6. Thins 3:1 with xylol.
7. Available in GREY, SALMON and OFF-WHITE.
8. Ground well to smooth texture.

MADE BY

THE VARNISH PRODUCTS COMPANY

5206 Harvard Avenue — Cleveland, Ohio

NON-INJURIOUS — ELECTRO — NON-INFLAMMABLE

COLD STRIPPER

FASTEST *in Action* — LOWEST *in Price*

WRITE FOR TESTING SAMPLE OR ORDER
5-GALLONS AT DRUM PRICE

Specify whether dip or brush type is desired

Allied Finishing Specialties Co.

2641 W. Grand Ave. • Chicago 12, Illinois

vice switches back to the drying phase. This action also prevents undue rise in temperature in the room. This feature is indispensable in a cold testing room.

* * *

Canadian Toys. Our neighbors to the North have increased toy production ten times in the last 15 years. In 1936 there were only six toy manufacturers in Canada, whereas today there are more than a hundred, according to the Canadian Press. In just 15 years, toys have provided Canada with a 30 million dollar industry.

* * *

Paper Money. America's newly-printed "folding money" is assured safe passage through a 360° F. drying-out trip by coated Fiberglass conveyor tape.

In its average daily output of $37,300,000 in greenbacks, the U. S. Bureau of Engraving & Printing reports that Fiberglass tapes on which bills repose have outlasted and outperformed their cotton predecessors.

Former cotton tapes lasted an aver-

Speed... production-line painting... improve results with...

Versatal Spra-King barrel pumps

Paint-Line Production Increases . . . Costs Decrease when the "Heart" of your Spraying System is Versatal!

Constant delays on the paint line can mean the difference between profit and loss on the run. The Versatal "Spra-King" Barrel Pump is your answer to peak efficiency at all times. Pump direct from original 55-gallon barrels with Versatal "Spra-King" and save time, money, and material. Ideal for circulating systems. Supplies multiple outlets many hundreds of feet away from working areas. Reduces fire hazards with paint isolated—*supplied from a central source.* Contact your Alemite dealer today for an immediate demonstration!

***(shown above)* New Versatal "Spra-King"** Model 7826. Eliminates barrel racking, straining and filling, uncapping and recapping pressure pots. Fits standard 55-gallon paint drums, bung or cover mounted.

A PRODUCT OF SW STEWART-WARNER

ALEMITE Versatal SPRAY PUMP EQUIPMENT

ARE YOUR THINNER COSTS TOO HIGH?

How To Save Money Safely On Thinners

We make nothing but thinners—For 27 years we have been saving money for big and little customers. They like us because we make the thinner they want at a money-saving price!

Let us show you how a Lacquer Thinner SPECIALIST can supply you with the right Thinner . . . and still save you money.

Just fill out form below and mail today. We'll work out a Thinner *especially for you*, and send a sample. Think we can do it for 85¢ or less a gallon too!

POTTER PAINT CO., INC.
CORTLAND 1, N. Y.
THINNER SPECIALISTS

The product we make is:_____
We use Lacquer Thinner for:
☐ Spray ☐ Dip ☐ Cleaning ☐ Other_____
We use Lacquer Thinner on:
☐ Metal ☐ Wood ☐ Other_____
We want it to dry:
☐ Fast ☐ Slow ☐ Medium

Name_____
Address_____
City_____ Zone____ State_____

age of ten days, occasionally catching fire, causing the currency to ignite. Fiberglass tapes have now performed successfully in excess of five months, thereby insuring a steady output of greenbacks day after day.

After printing, large currency sheets are placed in tape-conveyor machines which carry them through a sizing bath and drying oven in less than a minute.

* * *

Leaky Walls may be eliminated by a new invisible water repellent silicone called Hydroside SX Colorless. This material may be brushed or sprayed on concrete or masonry walls above the grade to provide an efficient barrier to capillary moisture behind the surface. One coat does the work, and it is said to minimize efflorescence. It provides water repellency, yet permits masonry to "breathe."

Treated surfaces may be successfully painted with any type paint except cement base paints.

* * *

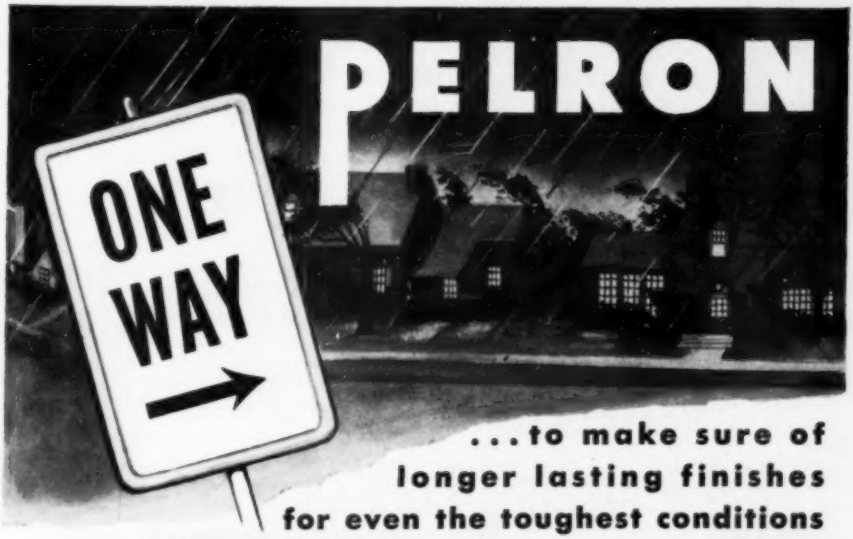
Measuring Moisture Content of commodities such as chemicals, detergents, sand, etc., has been speeded up through the development of a new instrument. The device precisely detects the moisture content of a commodity in five to a maximum of 15 minutes, whereas previous methods of drying samples in ovens to measure their moisture loss required from one to 12 hours.

Removal of moisture is accomplished by infrared radiation, and the weight of the moisture loss is shown by the torsion balance on a scale calibrated in percentage points.

* * *

Chemicals from Coal by hydrogenation has been perfected by Carbide & Carbon Chemicals Co. at its Institute, W. Va., plant. The process uses coal

(Continued on page 124)



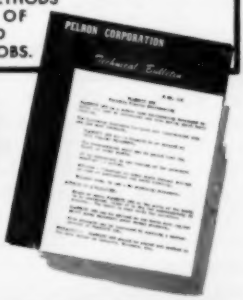
...to make sure of longer lasting finishes for even the toughest conditions

use PELRON Phoscote 299

The road sign above will say ONE WAY longer, no matter what the weather, if it's been properly cleaned and phosphatized before painting. "One way" to make sure is to use PELRON Phoscote combination cleaning and phosphatizing agent. It provides a better phosphate base for long lasting finishes at lower cost to you. Also many other phosphating chemicals available to meet *special* requirements. Get a recommendation from your Pelron representative today.

- MEETS REQUIREMENTS OF GOV'T. SPEC. JAN-C-490
- CLEANS AND PHOSPHATES IN ONE OPERATION
- MORE ECONOMICAL
- SPEEDS UP PRODUCTION
- PRODUCES A COATING WEIGHT UP TO 200 mg. PER SQ. FT.

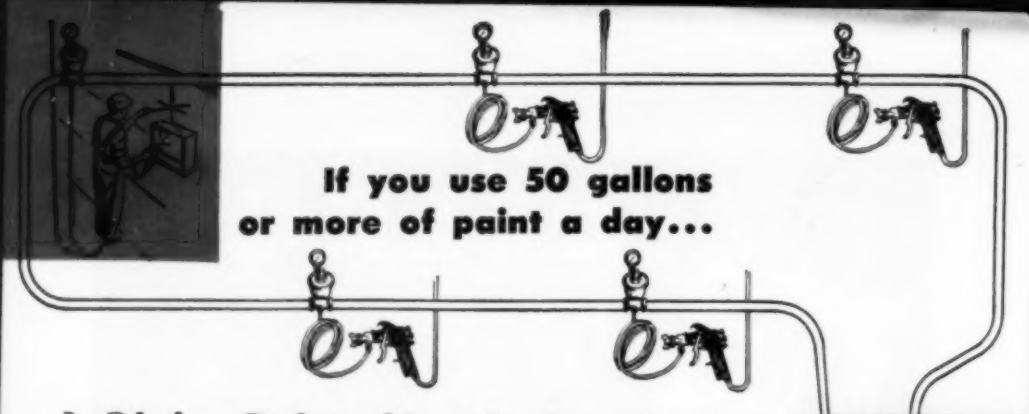
SEND FOR TECHNICAL BULLETIN ON APPLICATION METHODS FOR ALL TYPES OF CLEANING AND PHOSPHATING JOBS.



PELRON
CORPORATION
INDUSTRIAL OILS AND CHEMICALS
FOR BETTER PRODUCTION AT LOWER COST

7740 W. 47th Street • Lyons, Illinois

If you use 50 gallons or more of paint a day...



A Binks Paint Circulating System solves these two BIG Finishing Problems!

1 Identical finishes at every spray station. When you use a Binks Paint Circulating System, all paint...regardless of color or type...is mixed in and circulated from a central mixing point. Color and viscosity can be rigidly controlled.

To further insure uniform finishes, the material pressure at each spraying station can be set by the foreman...and cannot be altered by the operator.

So each station gets *exactly* the same paint and it's applied at *exactly* the same pressure. You are certain to get identical finishes.

2 Faster finishing at lower cost. When you use a Binks Paint Circulating System, there is no time lost waiting for delivery of paint to the booth...and no time lost changing colors.

Finishing is faster, because the operator sprays without interruption.

Your finishing costs are lower, too, for rejection or refinishing due to poor color-match is eliminated. You also save the cost of trucking material tanks to and from spray stations.

The simplest type of Binks Paint Circulating System is diagrammed above. It consists of a material tank with an agitator, a pipe line to the spray stations and back, and a circulating pump. Paint is constantly circulated. This prevents collection of sediment in the pipe lines or settling out of suspended solids in the paint.

Above: A typical mixing room for a Binks Paint Circulating System. Notice the laboratory-like cleanliness.

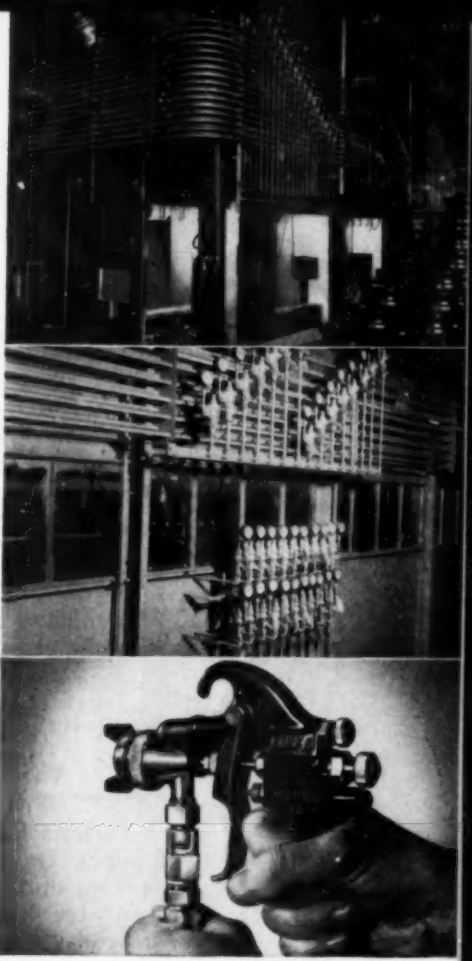
A Binks Paint Circulating System also provides these added advantages

a. A neater, a safer plant. Notice how overhead pipe lines are used to transport the paint to stations. There are no paint drums or pressure tanks to move or handle.

Flammable paint materials are stored under ideal safety conditions. Handling paints this modern way protects people and property. It can also mean big insurance savings.

b. Complete control over the material pressure at the gun. A foreman sets the pressure regulator at each station with a removable key. Once set, the pressure cannot be changed by the operator. Since the material pressure and paint viscosity at each station are the same, a paint film of *uniform* thickness is applied.

c. Faster production. There's no time lost in changing colors. The operator just detaches the hose for one color with a twist of the wrist...and hooks on the hose for another color in a similar swift motion. One brief "pfft" cleans the gun ...and he starts spraying the new color.



a.

b.

c.

SEND FOR BULLETIN 550, which describes the operating principle and advantages of Binks Paint Circulating Systems. No obligation. Address: Binks Manufacturing Co. 3116-40 Carroll Ave., Chicago 12, Illinois

Binks

GUNS • SPRAY BOOTHS • MATERIAL TANKS • EXTRACTORS & ACCESSORIES

REPRESENTATIVES IN PRINCIPAL U. S. & CANADIAN CITIES • SEE YOUR CLASSIFIED DIRECTORY

STOP

...paint booth troubles!

Check your problem here

and mail to The DuBois Company with your name and address

__Plugged Nozzles
__Foaming
__Scale & Paint Clogged Lines
__High Maintenance Costs
__Sludge in Reservoir
__Pump Break-Downs
__Loss of Pressure
__High Compound Consumption
__Water Breaks
__ Loss of Reclaim Through Polymerized Sludge

A DuBois Representative will show you how the proper DuBois compound and the continuing service of DuBois field specialists will eliminate your trouble! This right combination of engineered paint booth maintenance and the no-charge service of DuBois specialists will keep your paint booths operating at top efficiency. Let us show you . . . it costs nothing to learn the facts . . . and it will pay you enormous dividends.

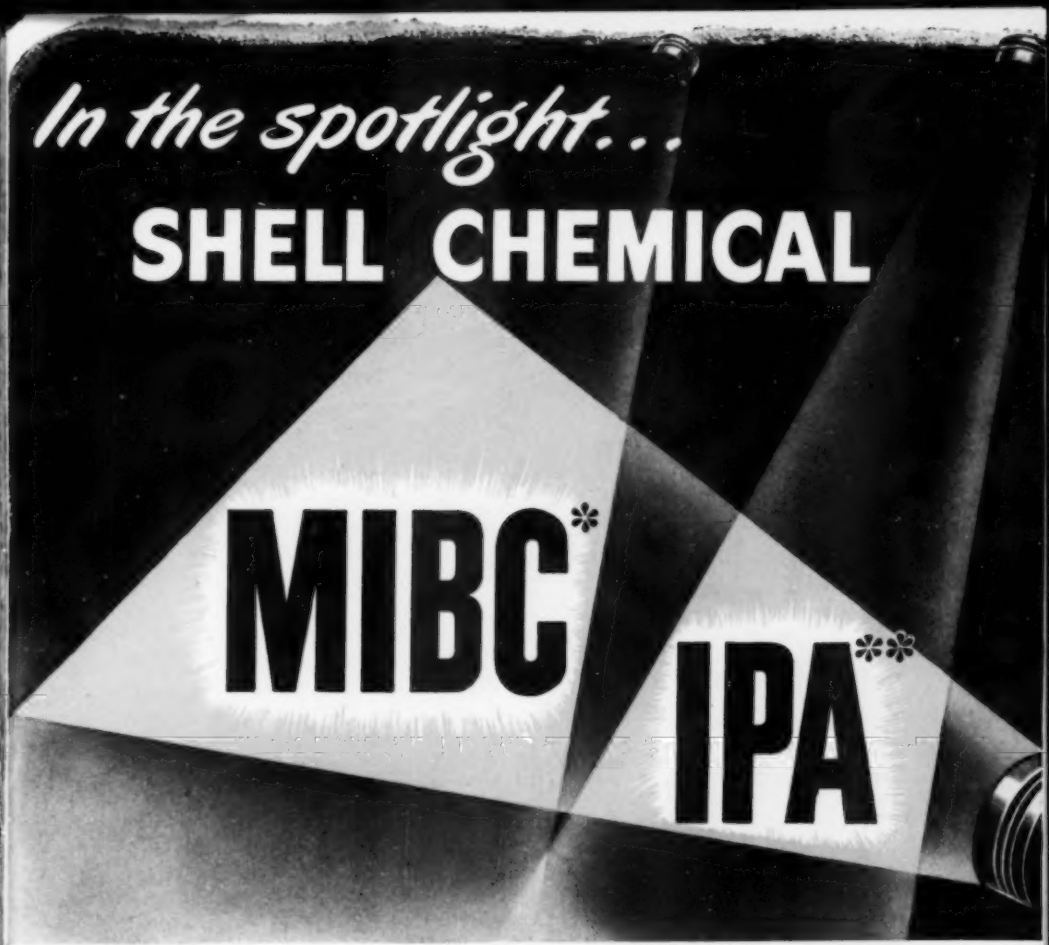
FREE SLIDE RULE: Just send us your name and address on your company's letterhead and we will send you without charge or obligation a DuBois handy 6" slide rule. Supply limited! Send for yours **now.**

Take advantage of this offer. Check your trouble above, tear out this page and mail with your name and address to The DuBois Company.

THE INDUSTRIAL DIVISION

The Du Bois Company

Cincinnati 3, Ohio and Los Angeles 33, Calif.



Latent solvent team boosts lacquer quality

Here's a solvent combination that gives top quality to your lacquers and lacquer thinners. MIBC promotes high gloss . . . blush resistance . . . excellent flow-out. IPA contributes strong latent solvent action, and at low cost.

MIBC and IPA can, of course, be mixed in a wide range of proportions. This means the sort of flexibility that will satisfy any specific latent solvent requirement. Simply tailor your mix to suit your needs.

High-grade lacquers...at reduced solvent cost with flexibility in formulation. That's what MIBC-IPA blends offer. *Try them.*

*Methyl Isobutyl Carbinol **Isopropyl Alcohol

SHELL CHEMICAL CORPORATION

CHEMICAL PARTNER OF INDUSTRY AND AGRICULTURE

EASTERN DIVISION: 500 Fifth Avenue, New York 36
WESTERN DIVISION: 100 Bush Street, San Francisco 6

Los Angeles • Houston • St. Louis • Chicago • Cleveland • Boston • Detroit • Newark • Atlanta
IN CANADA—Shell Oil Company of Canada, Limited • Toronto • Montreal • Vancouver

4 shortcuts to SURER finishing results!

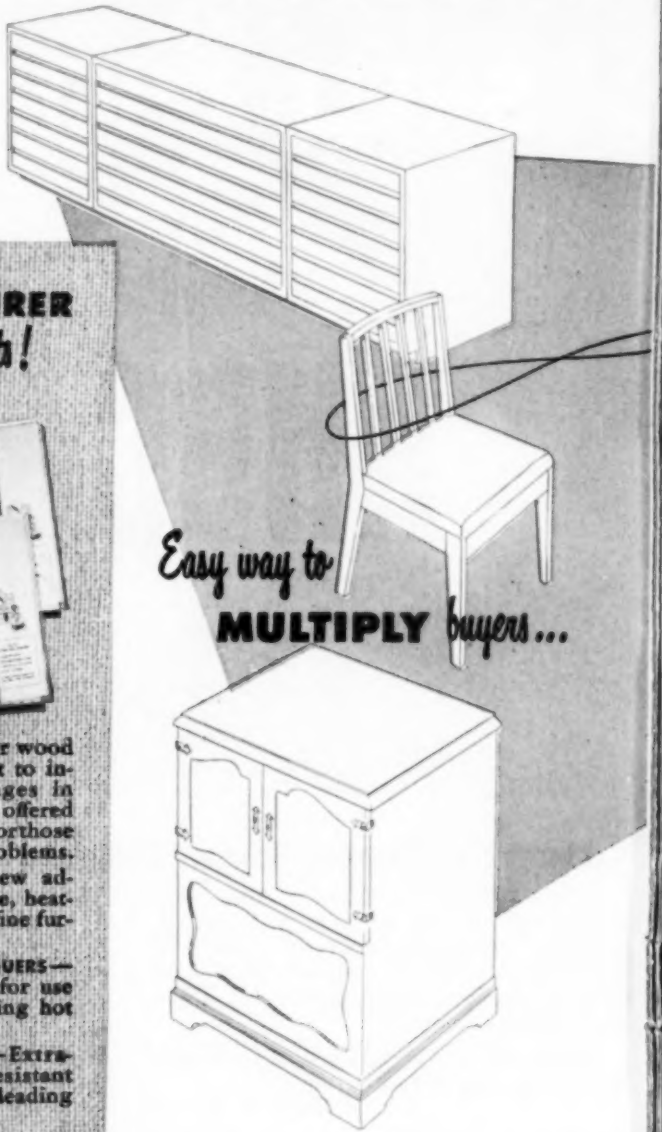
If you finish furniture or wood products, you will want to investigate the advantages in methods and materials offered in these brochures. Ask for those applicable to your problems.

K-101—KEMVAR®—A new advance in high resistance, heat-converting finishes for fine furniture.

H-102—HEETCLAD® LACQUERS—Materials and systems for use with modern, cost-cutting hot spray methods.

T-103—TV LACQUERS—Extra-flexible, tough, mar-resistant materials in service on leading makes of TV cabinets.

H-104—HOMOCLAD®—A totally unique sealer and system with highest properties of bonding and moisture sealing.



Easy way to **MULTIPLY** buyers...

ADD the sales appeal of the BEST-KNOWN NAME IN FINISHES!

A *known* name, identifying the finish on your product, removes the doubt in buyers' minds . . . does away with hesitancy . . . often swings buying preference in favor of the known reliability of a familiar name!

That's why market-minded manufacturers, more and more, are looking to Sherwin-Williams Custom Finishes to meet their finishing requirements . . . and to contribute *added* sales appeal to their own quality products with tags identifying the finish on the product.

Sherwin-Williams Custom Finish tags and seals are available to users of Sherwin-Williams quality materials such as KEM-VAR Furniture Finishes, HEETCLAD Lacquers, TV Lacquers, HOMOCLAD Sealers and other products. They offer important *added* reasons for looking into the advantages of these outstanding finishing materials.

Ask your Sherwin-Williams Industrial Representative for details, or write The Sherwin-Williams Co., General Industrial Division, Cleveland 1, Ohio.

SHERWIN-WILLIAMS

INDUSTRIAL FINISHES

Automobiles and Accessories
Baby Furniture
Clothes Hampers
Doll Carriages
Electric Appliances
Farm Equipment
Gas Tanks
Heaters
Ice Boxes
Jacks
Kitchen Cabinets
License Plates
Machinery
Novelties
Office Fixtures
Playground Equipment
Quonset Huts
Rubber Footwear
Stokers
Trucks—Trailers
Unloaders
Ventilators
Wood Furniture
X-Ray Machines
Yachts
Zoning Paints

A TO Z

For 77 years the top quality of O'Brien Industrial Finishes has been proved in American industry. Our constant research and broad experience can be of benefit to you—whatever product you make. The O'Brien Corporation, South Bend 21, Indiana.

O'BRIEN

INDUSTRIAL Since 1875 FINISHES

SUSTAINED QUALITY

Lacquer Thinners by BARKER have this characteristic of sustained quality because they are formulated under conditions of automatic control—from storage through the blending processes, to final shipment. The new Barker plant, completely automatic in every detail, makes this possible.

For sustained quality in lacquer thinners, try Barker service, whether your requirements are just a 5-gal. special blend, or for as much as a 12,000-gal. tank car.

• Partial view of our new plant and storage facilities—250,000 gallons capacity.

BARKER CHEMICAL COMPANY

One of America's Largest Manufacturers of Lacquer Thinners

700 EAST 138TH STREET • CHICAGO 27, ILLINOIS

A new "first" in service . . .

REBUILT EXCHANGE UNIT

DEVILBISS

Genuine Factory Standard

Saves time! Saves money! Eliminates costly delays for repairs or service! New DeVilbiss Rebuilt Exchange Service is another outstanding example of DeVilbiss leadership in service to customers. Read on . . .

offered only by DeVilbiss

Rebuilt Exchange Service !

WHAT IT IS

The DeVilbiss Rebuilt Exchange Service enables you to replace worn DeVilbiss equipment with genuine, fully guaranteed, factory-rebuilt units for a nominal exchange charge.

ADVANTAGES TO YOU

(1) Delays for equipment repairs will be eliminated! (2) No need for you to tie up money or men in your own shop to handle repairs! (3) Rebuilt units will be available thru local DeVilbiss outlets anywhere in the United States! (4) Losses due to shutdowns for repairs will be eliminated! (5) Rebuilt Exchange Units automatically include latest improvements in design.

WHAT YOU DO

This new service is currently being set up with your local DeVilbiss jobber or distributor. Contact him to turn in your worn DeVilbiss MBC 510 Spray Gun or Air Compressor (bare) for a genuine, fully guaranteed, factory-rebuilt model.

THE DEVILBISS COMPANY, Toledo, Ohio

Windsor, Ontario • London, England • Santa Clara, Calif.

Branch Offices in Principal Cities

GUARANTEE!

DeVilbiss Rebuilt Exchange Equipment is completely overhauled and reconditioned to factory standards and *carries the same guarantee as new equipment!*

FOR BETTER SERVICE, BUY

DEVILBISS

IS THERE A BETTER WAY TO COAT YOUR PRODUCT?

An Egyptian Industrial Finishes Specialist can help you find it.

Egyptian's outstanding reputation for finding "A BETTER WAY" makes your Egyptian Specialist and the ingenious Lab. Technicians behind him "all star selections" for your product planning team.

Their highly specialized knowledge can help make your product look better...wear better...sell better. Often their suggestions have broken seemingly impossible finishing bottlenecks, appreciably cutting overall finishing costs... they can keep you constantly informed of new finishing techniques and how you can benefit by them ... Your Egyptian Specialist can point out the advantages of the dip, spray, roller coat, tumble, hot spray and electrostatic application methods. He can tell you the required specifications for finishing any Government Product.

If there IS a better way..."Egyptian Finishing Know-How" can help you find it. Invite an Egyptian Industrial Finishes Specialist to call on you today.

EGYPTIAN

INDUSTRIAL FINISHES

SYNTHETICS • VARNISHES
LACQUERS • ENAMELS

The EGYPTIAN LACQUER MANUFACTURING CO.

Box 444, Newark 1, New Jersey
Plants: South Kearny, N. J. • Lafayette, Ind.

Continuous Conveyor FINISHING SYSTEM

To meet a stepped-up production schedule for Uncle Sam, the Ceco Steel Products Corporation of Chicago, installed this DESPATCH Finishing System used for cleaning, painting and finish baking of airplane landing mats.

The system comprises a gas heated, 2-stage, dip cleaning unit with alkali wash and hot water rinse, a paint dip tank and single pass finish bake oven of bottom entry, "A" type design. The oven is gas-fired and operates at a maximum temperature of 350°F. Material is suspended from cross rods on a continuous conveyor, which returns to the loading zone over the top of the oven.

Fifty Years' Experience

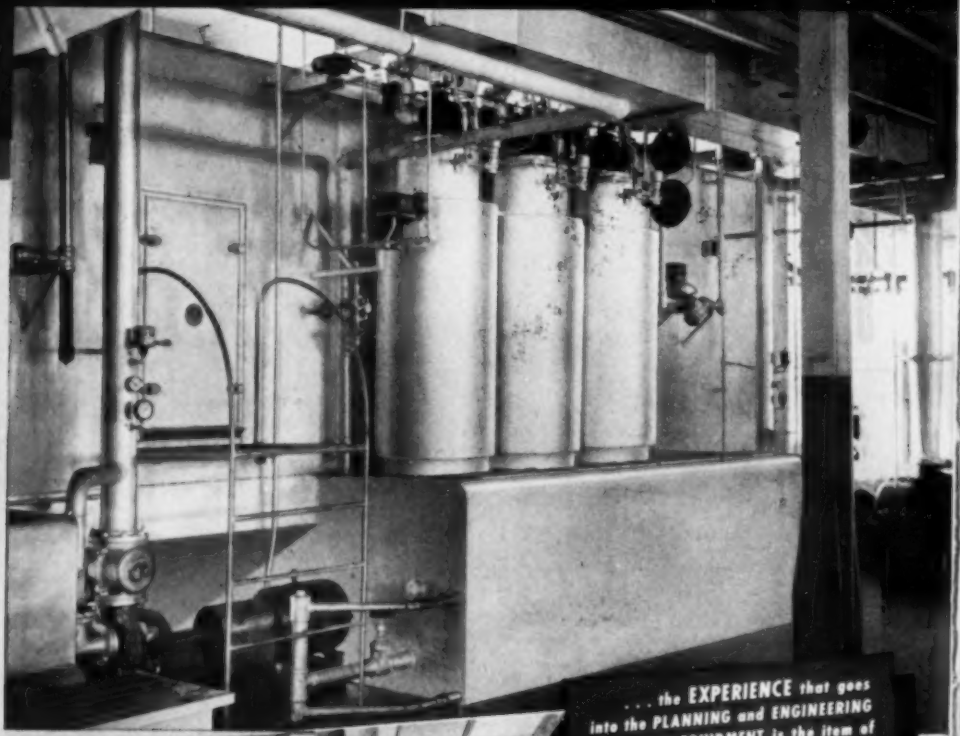
DESPATCH CAN HELP YOU BOOST PRODUCTION

Through 50 years of continuous research and on-the-job experience Despatch engineers have been accumulating facts and figures on how to give you better, higher producing finishing systems. Today, you benefit by these years of experience when you call on Despatch to help you. Despatch engineers will gladly analyze your requirements . . . will plan, select, coordinate and install complete Finishing Systems or individual units.

WRITE OR WIRE TODAY TO DEPT. E.

FIFTIETH ANNIVERSARY
DESPATCH OVEN COMPANY

COMPLET



. . . the **EXPERIENCE** that goes into the **PLANNING** and **ENGINEERING** of **MAHON EQUIPMENT** is the item of **GREATEST VALUE** to **YOU!**

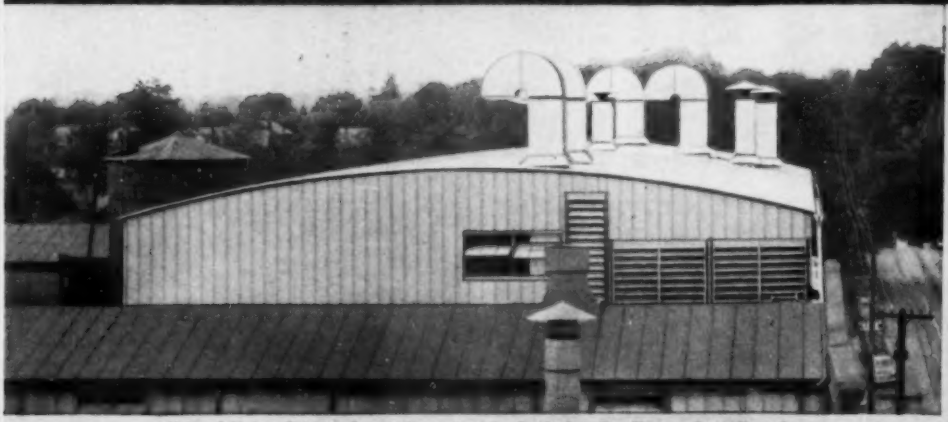
Above you see Mahon Fire-Jet Heating Units (Patent Applied For) installed on a solution tank of the Cleaning and Rust Proofing Machine at Mullins Mfg. Corp. These modern heating Units eliminate all heat exchangers such as immersion fire tubes, steam coils, etc., and thereby simplify maintenance. Solution tanks are free from pipes, tubes and other obstructions and are easily cleaned. Mahon Fire-Jet Heating Units have eliminated the difficulties experienced with other solution heating devices.

M

E

Finishing SYSTEMS

. . . for ENAMELS • LACQUER • PAINT • VARNISH



Units of Mahon Finishing System Housed on the Roof of Mullins Plant to Save Floor Space.

Every Unit of YOUNGSTOWN KITCHENS Gets its LUSTROUS FINISH in MAHON EQUIPMENT!

Wherever finish is a prime sales factor, there you will find Mahon Finishing Equipment. That is why the Mullins Manufacturing Corporation, producers of Youngstown Kitchens and the Jet-Tower Dishwasher, rely on Mahon engineers to provide the modern finishing equipment to insure their products the finest finish obtainable. This is not an isolated case . . . a survey will reveal that more home appliances and more automobiles—products where fine finish is imperative—are finished in Mahon Finishing Systems than all other types combined. In order to save floor space in the Mullins installation, the Finish Baking Oven, Oven Heating Units, Exhaust Fans, and Filtered Air Supply Systems for two Hydro-Filter Spray Booths (60 feet and 40 feet in length) were housed on the roof in an inclosure which is an integral part of the system. Metal Cleaning and Rust Proofing Equipment, Dry-Off Oven and Spray Booths are located on the third floor immediately below. If you are contemplating new finishing equipment, you will find Mahon better qualified to advise you . . . experience in planning, engineering, building and installing thousands of finishing systems of every type and size, for virtually every industry, has endowed Mahon engineers with a wealth of technical knowledge and practical know-how not available to you elsewhere. See Sweet's Mechanical Industries File for information, or write for Catalog No. A-652.

THE R. C. MAHON COMPANY

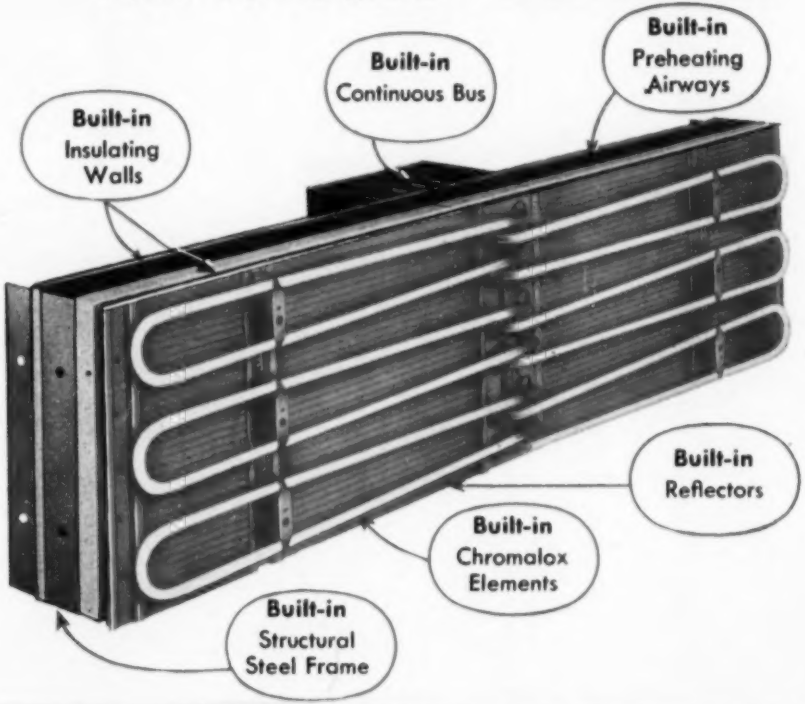
HOME OFFICE and PLANT, Detroit 34, Mich. • WESTERN SALES DIVISION, Chicago 4, Ill.

Engineers and Manufacturers of Complete Finishing Systems—including Metal Cleaning and Pickling Equipment, Metal Cleaning and Rust Proofing Equipment, Dry-Off Ovens, Hydro-Filter Spray Booths, Filtered Air Supply Systems, and Drying and Baking Ovens; Core Ovens, Hydro-Foam Dust Collectors, Dust Traps, Fog-Filters, and other Units of Special Equipment.

AHON

Announcing

a new and better *INFRARED* Generator



CHROMALOX

FAR-INFRARED

For Baking, Drying, Curing, Dehydrating

and many other applications.

9 WAYS BETTER

1. **Longer wave length**—absorbed equally fast by all colors.
2. **Shatter-proof construction**—nothing to break and contaminate.
3. **Non-diminishing output** from all-metal Chromalox tubular heat generators.
4. **Uniform heat**—no hot or cold spots.
5. **High intensity radiation**—with more watts per square foot.
6. **Quick heat-up** with energy transformed instantly into heat on the work.
7. **Low-cost oven assembly.**
8. **Infinitely variable output**—from 0 to 100% of capacity.
9. **Additionally safe** for any work involving volatiles.

CHROMALOX *Electric* RADIANT PANELS

Now, more efficient *far*-infrared comes in convenient pre-engineered panels, reducing oven building to a matter of determining heat requirements and assembling panels to fit the job.

CHROMALOX Electric Radiant Panels generate more uniformly absorbed *far*-infrared heat with quick heat-up and reduced oven lengths.

It's the *far*-infrared wave length that makes the difference.

- ✓ **9200 Btu's per square foot output per hour.**
- ✓ **Insulated for voltages to 575 V.**
- ✓ **Lowest installed cost per kilowatt and per square foot.**
- ✓ **Work temperatures to 700° F. easily obtained.**
- ✓ **Accurate "dialed" control.**
- ✓ **Absolutely uniform radiation—no hot or cold spots.**
- ✓ **Built to UL and NBFU requirements.**

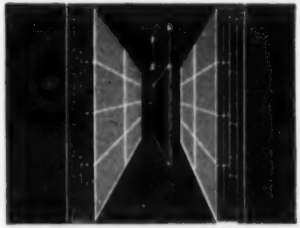
Now. . . Oven Building as Simple as

It's easy to build ovens of any desired height and length with lightweight Chromalox Electric Radiant Panels. Panels come in 1 x 4 ft. and 2 x 4 ft. sizes, ready to erect and connect with easy-to-follow instructions in each carton. Chromalox on-the-spot engineering assistance to help determine your requirements is yours—no obligation, of course.

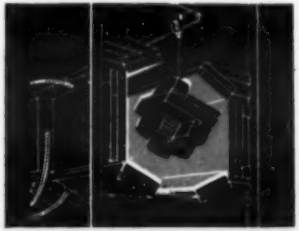
CHROMALOX *Electric Heat*

Does More - Better - Consistently

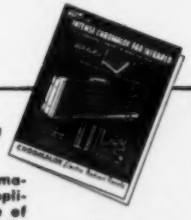
Radiant Heating Division EDWIN L. WIEGAND CO.,
7559 THOMAS BLVD., PITTSBURGH 8, PA.



Easily erected banks of Chromalox Radiant Panels are ideal for line production. *Far*-infrared heat is radiated directly and uniformly without hot spots over entire work area.



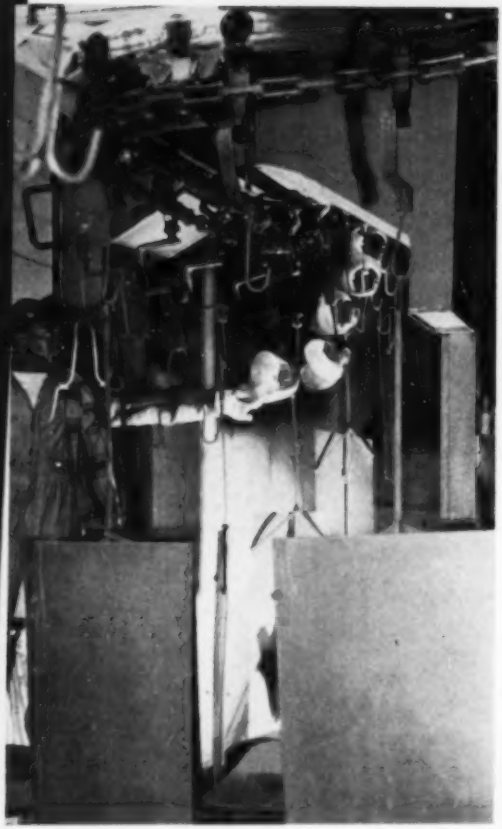
Chromalox Radiant Panels can be erected into any oven shape. Rugged construction permits their use in assembly lines, even when hazards of splashed liquids, volatiles and moisture are present.



Get this Bulletin

It contains complete information, specifications and application ideas for the use of Chromalox Radiant Panels. Write for your copy today.

IC-66



Transfer of

It's done on power feed roller coating and graining machines; includes ground color coating, undertone and overtone color printing, a clear top coat and baking . . . but first comes the five-stage metal cleaning, oven dry-off and a 2-stage wipe-off.

Cut-to-size sheets of steel go through a five-stage metal washer and dry-off oven before the background color is rolled on.

REPRODUCING the grain of fine woods and marble patterns on metal, plastics and composition boards has long been practiced in the finishing industry. The requirements of modern furniture, radio and television cabinets demand a variety of wood grain, marble and other designs, and an even greater variety of colors.

The reproduction of certain wood grain in blond finishes calls for 3-color work, namely a background color, an undertone color and an overtone color — plus an overall clear top coat. This type of job presents two problems: 1) registration and 2) cost. We have solved both big problems through the use of modern methods and mechanical devices.

The fundamental principle of grain transfer has not changed, nor is it likely to in the foreseeable future. However, methods have been changed to make the operation more mechanical in order to speed up production and reduce costs.

By HOWARD T. DAVIS, Mgr. Graining Sales & Service
Parker-Wolverine Division of The Udylite Corporation

Wood Grain to Sheet Metal

For simplicity I shall refer to it as grain transfer; let it be understood that this term not only includes wood graining but marble patterns and various other designs.

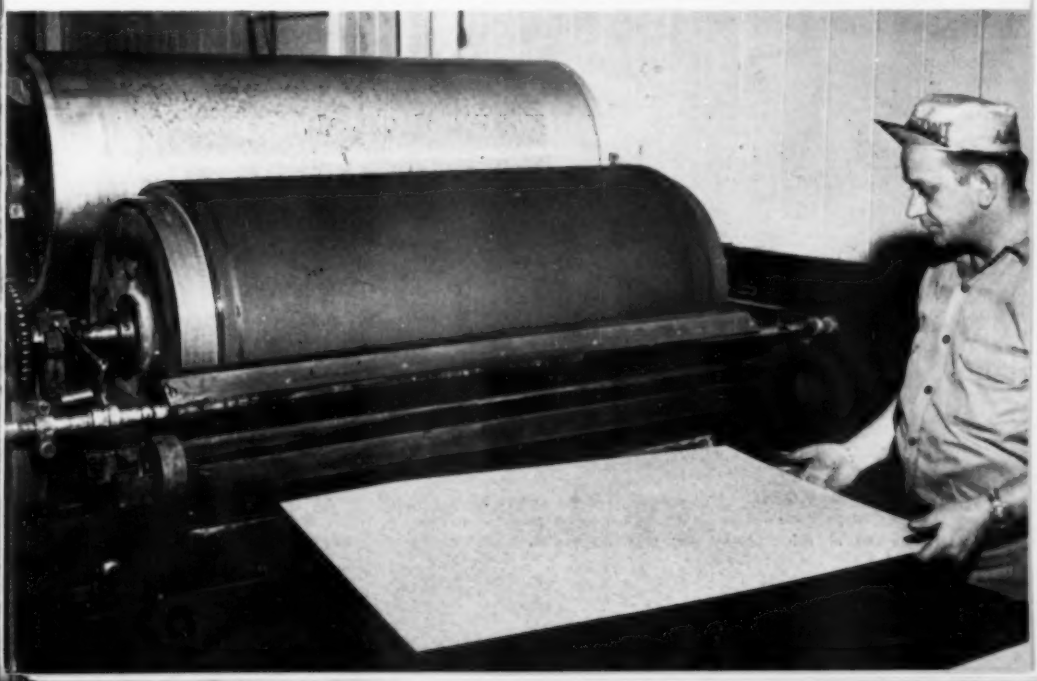
You are familiar with the usual hand-operated roller method of grain transfer, where a composition roller is used to pick up the grain figure from an inked, etched copper plate, and the design is applied to a sheet of metal which has been coated previously with a background color. We accomplish the same thing mechanically.

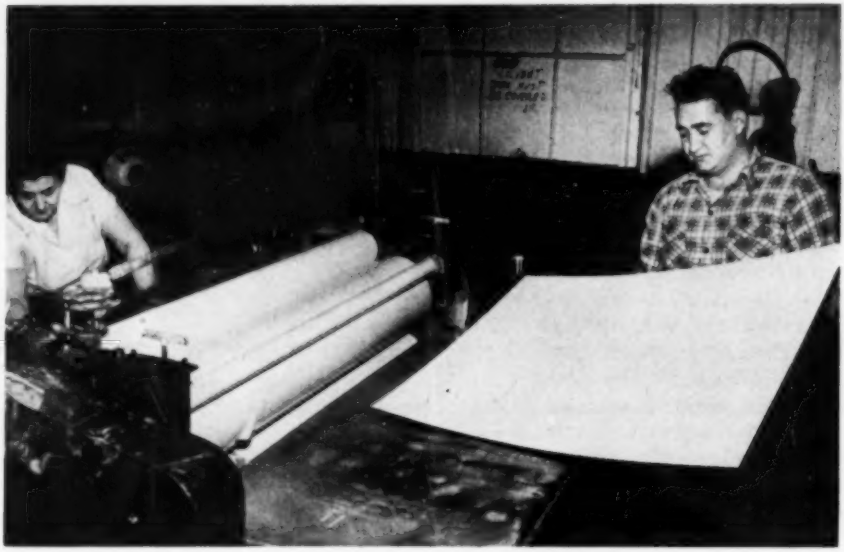
Cut-to-size sheets of steel are suspended from an overhead monorail conveyor which carries them through a 5-stage metal washer. Solutions are sprayed on the sheets from four sides at 25-lbs. pressure. The metal cleaning and rustproofing process is as follows:

1) Alkali cleaner (0.09% conc.) at 160° F.
2) Hot rinse at 140° F.
3) Rustproofiing solution at 160° F.
4) Cold water rinse
5) Mild chromic acid solution at 140° F.

The clean metal sheets pass through a dry-off oven before they are removed from the conveyor, loaded onto trucks and taken to the graining room. Just before these clean sheets of steel are placed on the horizontal roller conveyor they

Here is the roller coater that applies toptone inked design. The chrome plated, copper faced steel roller, at back, is the design roller; the semi-hard rubber roller in foreground is the applicator roller which picks up the design by contact and transfers it to metal sheets.





This roller coater applies the background color coat.

Operator wears white cotton gloves to feed background coated sheets into roller coater which applies undertone inked grain figure. The roller conveyor at right carries sheets to second roller coater, 30-ft. away, for printing overtone inked grain figure. Infrared baking follows.

are carefully wiped with naphtha to remove finger marks or dirt particles which may have been picked up after the sheets left the metal washer. Then they are placed on a horizontal roller conveyor which carries them into the graining room. Here the upside of each sheet is tack ragged.

It may seem that we are overly careful about preparing these sheets of steel for finishing, but the high quality of our finish demands all of these precautionary measures.

Background Color Coat is Applied by Roller Coater

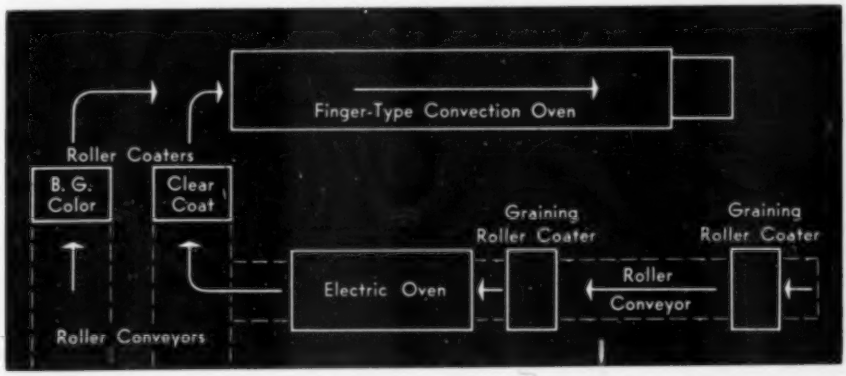
Continuing on the roller conveyor, the steel sheets pass through a roller coater which applies the background color coat. This is alkyd-resin-base synthetic enamel of from 50 to 70 seconds viscosity at 78° F., as measured in a No. 4 Ford cup. The variation in viscosity depends upon the quantity of pigment and opacity of the material. The wet film thickness is approximately 1.2-mils.

The coated sheets of steel are placed in a finger-type convection oven where the ground coat is baked for 17 minutes at 300° F. The cooling period, at the exit end of the oven, is 10 minutes.

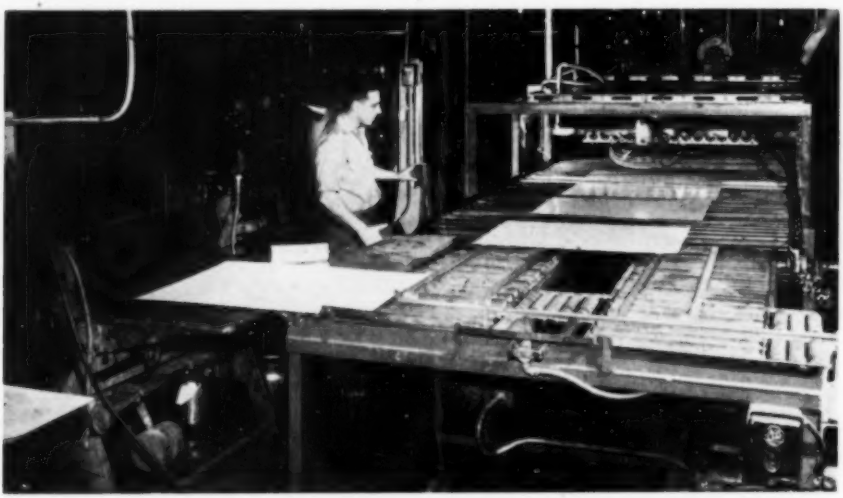
Graining Machines Transfer Grain Figure in Two Colors

The ground-coated sheets of steel are now ready for transfer of the grain figure. This is done by passing them through a roller coater which applies the undertone inked design. As the sheets emerge from this roller coater, a roller conveyor carries them a distance of 30-ft. which allows sufficient time for the fast-drying undertone ink to flash dry, so that it will not be picked up by the applicator roller of a second graining coater which applies the overtone ink.

Leaving this second roller coater the sheets pass through an infrared rod-type electric oven to dry the ink coats for two minutes at 130° F. At the exit end of the oven a fan cools the sheets as they travel to a second horizontal roller con-



Approximate layout of conveyors, roller coaters and ovens in setup for graining sheet metal.



Exit end of infrared rod-type electric oven which bakes printed grain figure. The electric fan cools sheets as they travel to the cross conveyor which carries them through the roller coater shown at the left in picture. This roller coater applies protective top clear coating.

veyor which is positioned at right angles to the oven conveyor.

This second roller conveyor carries the sheets through a roller coater which applies an overall coat of clear vinyl-resin base material. The clear top coat is applied at a viscosity of 55 seconds at 78° F., as measured in a No. 4 Ford cup; wet film thickness, 0.08-mils. Completely coated sheets are placed in the same finger-type convection oven that was used for baking the background color. The clear protective coat is baked for 17 minutes at 300° F.

Power-Feed Roller Graining Machines

The roller coating machine that transfers the grain pattern has an inking roller of rubber, a chrome plated "design" (or graining) roller, a semi-hard rubber applicator roller, and a power-driven feed roller. Graining ink is placed in a pan in which the inking roller operates; it is picked up and transferred, by contact, to the design roller. A doctor blade scrapes off surplus ink from the design roller, leaving ink only in etched design.

The grain figure is picked up by the semi-hard rubber applicator roll through contact with the design roller, and is transferred directly to the metal sheet as the latter passes between the applicator roll and feed roll. A doctor blade also contacts the semi-hard rubber applicator roll to remove the remains of the inked design before it contacts the design roller again. This cleaning of the applicator roll is important, for if any part of the inked design remained on the applicator roll when it again contacts the design roller to receive a fresh

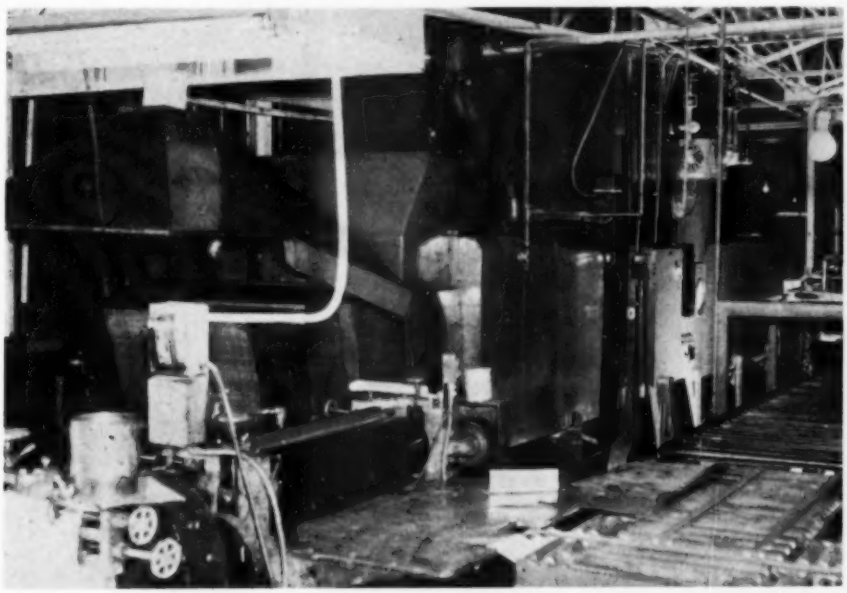
impression, then the grain figure would be blurred.

The design roller, 21-in. in diameter, is made of steel but is faced with copper plate etched with the wood grain figure and then chrome plated to resist the wear of continuous scraping by the doctor blade. The thickness of the chrome plating must be carefully controlled so that the etched grain figure will retain its true design in every detail. The semi-hard rubber applicator roller is also 21-in. in diameter.

The doctor blades play an important part in the graining machines. These blades must be absolutely straight, true and sharp, with their scraping edges ground and honed on a 45° angle; otherwise, traces or streaks of unwanted ink will remain on the surface of the roller and be deposited on the surface of the metal sheet that is being grained.

Both roller graining machines—that is, the one used to apply the undertone ink and the other for overtone ink—are identical in operation. For some grain reproduction the same grain design is used on the design rollers of both machines, and different colors of ink produce the required color of finish. For other grain reproduction jobs an entirely different design roller is used for applying the overtone ink, which is also a different color from the undertone ink.

[*Continued on page 33*]



At left you see the entrance to convection oven, with its cross bar conveyor which has projecting slender rods to support coated metal sheets on edge. In this oven the background color coat is baked—and later the top clear coat which covers the printed grain design.

WHATEVER THE SIZE OR SHAPE...

it makes no difference whether you're finishing refrigerators or washing machines . . . chairs ironing boards or any one of hundreds of products

● On most production lines, The RANSBURG No. 2 PROCESS will give 25% to 75% more pieces per gallon than ANY other spray finishing system.

Of course, the increase will be much greater over conventional hand spray methods, and in ALL cases, there is

NO OVERSPRAY TO BE EXHAUSTED

Whatever your product might be, if your production volume justifies conveyorized painting, chances are The Ransburg No. 2 Process will do the job BETTER . . . and for LESS.

RANSBURG ELECTRO-COATING CORP.

Indianapolis 7, Indiana

RANSBURG

Undertone & Overtone Graining Requires Registering Colors

The use of undertone and overtone inks presents a problem of getting exact registration when the second graining ink is applied. This matter of getting exact registration makes it necessary to use adjustable guides on the infeed bed of the second machine. Sheets of metal printed with the undertone graining must be fed into the second roller coater between these guides; otherwise, the overtone ink design may be out of register with the undertone graining. An off-register printing would not only distort or destroy the correct color combination of the two inks, but it would blur the grain design. A correct setting of the guides can be accomplished only by trial and error.

Mixing and Blending of Color Inks

To produce undertone and overtone inks which, when combined over a given background color, will match a wood sample finished in a blond finish, is a delicate operation. To start, a full-strength ink of suitable color is used; then this is diluted by adding small quantities of transparent ink and solvent. The transparent ink reduces the opaqueness of the color ink, and the solvent reduces its viscosity.

These reducers must be added sparingly in both undertone and overtone inks, for here we are not only dealing with a combination of colors, but the degree or amount of these colors which, when combined in the design, will produce a grain figure that matches the finished wood sample. Experience alone is a great aid in this blending of colors, but perfection can only be achieved by trial and error.

Hercules Assignment

The assignment of Mr. J. G. Antonak, as a technical representative in Chicago, for the Synthetics Department of Hercules Powder Co., was announced recently. Mr. Antonak replaces Mr. G. E. Osburn, who has been transferred to Wilmington and appointed sales supervisor for Synthetics Department products in adhesive, printing ink, and petroleum applications.

Wm. T. Utley Retires From Ditzler Div'n. of P. P. G. Co.

Retirement of William T. Utley, divisional director of the Ditzler Color Division, Pittsburgh Plate Glass Co., has been announced by E. D. Peck, vice president.

Associated with Ditzler since 1913, Mr. Utley served the automotive paint manufacturing firm in many capacities during the 39-year period. He was treasurer and vice president of Ditzler Color Co. until 1928 when the firm became the Ditzler Color Division of Pittsburgh Plate.

William T. Utley and Harold H. Hill

Since 1928, Mr. Utley has served as assistant divisional director and during the last nine years as divisional director. Oldest member of the Ditzler Color Division in point of service, Mr. Utley is a native of Grand Rapids, Mich. and attended Michigan State College.

Harold H. Hill, industrial relations manager for Ditzler since 1947, succeeds Mr. Utley as divisional director. Mr. Hill joined Ditzler's traffic department during 1935 and has held successive positions of traffic, warehouse, personnel and industrial relations manager prior to his present appointment.

MAKE
Quick Facts
about
Polychrome Metallic Finishes
• Outstanding new vehicle developments
• Porcelain-like surfaces
• Obscures surface defects
• Easily applied—spray, then bake or air-dry to a high-quality finish.

YOUR PRODUCT A "Stand Out"

AT NO EXTRA COST

with a Polychrome Metallic Finish

pigmented with Alcoa Albron Pigment

It costs no more than an ordinary drab utility coating—the sales-appealing, pastel iridescence of a Polychrome metallic finish. Yet, look at the difference. Products finished with Polychrome have an extra sparkle on the dealer's floor that means extra sales.

Polychrome metallic finishes are easier to apply now with new vehicle developments and application techniques. Pick your color from the rainbow . . . spray it on . . . and bake or air-dry. Result? A lustrous, porcelain-like finish that stays bright and attractive.

Contact your supplier of industrial finishes. Polychrome metallic finishes are available in a variety of pastel colors—with Alcoa Aluminum Tinting Paste, Number 222, to add depth and luster.

* * *

For details, see your supplier or write ALUMINUM COMPANY OF AMERICA, 1732-F Gulf Building, Pittsburgh 19, Pennsylvania.

Why settle for "just any finish" when a* POLYCHROME *Metallic costs no more?

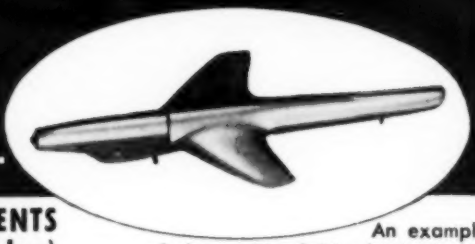
ALCOA

ALBRON PIGMENTS

for Production Finishes

ALBRON

MD Metallic Pigments for Industrial Finishes...



MD ALUMINUM PIGMENTS
(Pastes and Dry Flake Powders)
MD GOLD BRONZE POWDERS

An example of chrome-like finish obtained with the use of MD 769 Aluminum Paste.

MD Metallic Pigments meet a wide range of industrial finishing needs—from chrome-like finishes providing maximum brilliance and metallic lustre... polychrome, hammertone and other finishes... opalescent and irradescent effects in transparent enamels... to their incorporation in transparent and molded plastic products.

MD Aluminum Pigments can be used in air dry or baked finishes. They provide superior covering, smoothness and leveling. Available in leafing and non-leafing types.

MD Gold Bronze Powders have high pigment strength and fineness producing films of exceptionally high brilliance and smoothness in leafing vehicles as well as low cost coating.

Consult MD for your Metallic Pigments needs.

METALS DISINTEGRATING COMPANY, INC.
General Offices: Elizabeth B, New Jersey
Sales Offices: Chicago, Ill., Cleveland, Ohio
Plants: Elizabeth, N. J., Manchester, N. H., Berkeley, Calif., Emeryville, Calif.

1797 MD POWDER Since 1916

ALUMINUM PASTES
ALUMINUM POWDERS
GOLD BRONZE POWDERS

Custom Finishing Shop

I'm submitting this article about custom finishing shops as I have observed them over a period of time, including some of the better equipped places and several that certainly should have much more improved facilities.

BY TRAVELER

CUSTOM SHOPS vary in size and in the facilities they have available for handling small and large jobs in great variety. Those that cater chiefly to metal finishing must have equipment and facilities for metal cleaning and surface preparation as well as dip tanks, spray booths and one or more ovens. Often graining equipment is included and sometimes a roller coater. As certain customers are developed, facilities are generally added to take care of their work.

In all cases, of course, the operator of a custom finishing shop must keep in mind the need of choosing equipment that can be put to many uses on a variety of sizes, shapes and weights of parts or products. Some of his equipment, including conveyors, may have to be portable so it can be moved into position for one job and moved out of the way for another. The layout or arrangement of equipment in the building will be such that many different kinds of jobs can be put through with no one of them being handled too inefficiently or causing too much interference with other work.

Metal Cleaning and Surface Preparation

In several custom shops that I have visited, the facilities for metal cleaning and surface preparation included a trichlorethylene spray-vapor degreaser and a series of tanks for alkali-emulsion cleaning, rust proofing and acid etching; also a tank for safely cleaning and treating aluminum. These tanks are usually served by an overhead monorail that supports a movable electric or air hoist to raise and lower loaded baskets of parts to be cleaned.

The soil—that is, oil, grease, drawing compound and shop smudges—that you find on the surfaces of products to be finished in a custom shop is never uniform. These products are fabricated in different factories and each batch has it own particular soil. Products vary in size, shape, weight and the material from which they are made. Both sheet metal and castings are included. Custom shop operators try to find out what type of soil to expect on each new product they re-

ceive for finishing, but sometimes this information is difficult to obtain, as their customer may have purchased the products from another manufacturer.

Specifications demanded by different customers vary. Some products must be rustproofed; some products are made of aluminum and require different treatment; some are of zinc; others are made of sheet steel; and, of course, there are various kinds of castings. Sometimes it is necessary for the custom finisher to experiment with different types of cleaners before starting actual production.

Choosing a Conveyor That is Suited to Variety of Work

Choice of the type of conveyor to install depends somewhat on the size, shape and type of products to be finished. Most shops find it more convenient and desirable to use one or more short conveyors rather than a long one, such as you find in plants where large quantities of a few standardized products are made and finished. For instance, an overhead monorail conveyor could be installed so that it would pass through one spray booth and a bake oven. Then, just before it enters the spray booth, there could be a U-dip in the line so that a portable dip tank could be rolled into position under this depressed section. Parts to be coated could pass through the dip tank and then through the spray booth where no spray coat would be applied; and then move into and through the oven. This arrangement would permit either dip coating or spray finishing to be performed on the same conveyor line. Of course, if there is enough of it, a separate conveyor line could be set up and maintained for dip coating followed by oven drying.

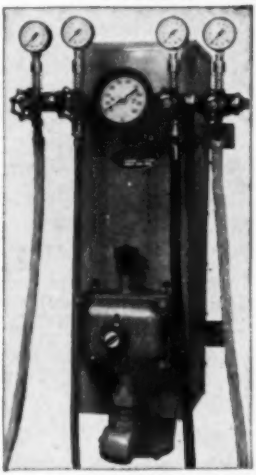
Next, a sort of carrousel conveyor of the traveling vertical-spindle type (short vertical spindles spaced 12 to 24-in. apart) could pass through another spray booth. Just beyond the turn leaving the booth, an infra-red electric oven could be

installed to bake the finish on such parts and products as can be conveniently mounted on the spindles of a traveling vertical-spindle conveyor. For long runs of certain type products, this setup could be converted into an automatic spray, where fixed spray guns apply the paint as the traveling short spindles rotate the products while they are passing through the spray booth. In this way the equipment could be used for both hand and automatic spray painting. [*To page 40*]

THE "CAMACO"

ELECTRIC AIR HOT SPRAY SYSTEM

Heats Paint at the Spray Gun!



Many features include—

- Savings up to 50% of material.
- Eliminates orange peel.
- Eliminates oil or water spots.
- Spray guns keep adjustment twice as long.
- One unit serves four guns.
- Air temperature and air pressure are closely regulated.
- Eliminates costly cleaning operation.
- Eliminates destruction to hose lines.
- Easy to install.

Proven in production use.

MR. M. J. LANZI, SUPERINTENDENT OF THE GONG BELL MANUFACTURING COMPANY AT EAST HAMPTON, CONNECTICUT, says: "Our Camaco 'Electric-Air' Heater is in constant use spraying colored enamels. It has eliminated clogging of spray guns and costly cleaning of tanks and lines. We are well satisfied with this unit and the finish it produces."

MR. RUBEN POTOFF OF THE PERM-O-LAST FINISHING COMPANY AT WATERBURY, CONNECTICUT, says: "We are using the Camaco 'Electric-Air' Heater to spray 30% solids clear synthetic. It has improved the finish by completely eliminating orange peel and we also get substantial savings in materials."

SPECIAL 60-DAY TRIAL OFFER!
MONEY BACK GUARANTEE!

It costs you nothing to give the Camaco "Electric Air" Heater a 60-day trial. If the unit is not completely satisfactory you can return it for full refund within 60 days from date of invoice.

PHONE, WIRE OR WRITE

The CAPITOL MACHINE CO.

Danbury, Connecticut **Tel. Danbury 3-2758**

The OAKITE CrysCoat* PROCESS does three things at one time:

1. Cleans metal rapidly
2. Conditions metals for painting
3. Increases resistance to corrosion

Eliminating the need for separate cleaning and phosphating operations, the CrysCoat Process cuts costs these ways:

- Uses less equipment
- Cuts operating time
- Reduces heating costs
- Saves cost of acid-proof equipment
- Reduces scaling and sludging
- Saves paint
- Reduces rejects

FREE Write to Oakite Products, Inc., 32F Rector St., New York 6, N. Y., for a copy of *"The OAKITE CrysCoat PROCESS"* describing 19 advantages.

*Reg. U. S. Pat. Off.

OAKITE

SPECIALIZED INDUSTRIAL CLEANING MATERIALS • METHODS • SERVICE

Technical Service Representatives Located in Principal Cities of United States and Canada

Designing, Using and Storing Dip Racks and Fixtures

A variety of hooks and racks are needed for holding various products for dip finishing, so that the parts will enter the liquid coating material in correct position for complete coating, and so that upon leaving the dip tank the material will drain properly. These racks offer quite a problem in storage after a job is completed. Many custom shop operators figure the cost of special racks into each job and, within a reasonable time after the job is completed they dispose of them. In such cases the customer is informed that the cost of special racks will be deducted on repeat orders if same are placed within a reasonable time limit. The length of time on the storage space available and these racks are held after completion of the job will depend largely the volume of production.

Auxiliary Equipment That is Often Useful

One or more batch type ovens are always included in a well balanced custom finishing shop. These ovens are used for small runs, or where a different baking temperature is required from other work being finished.

Also one or more open-head, tilt-type tumbling barrels will prove useful for coating small products that vary in size from buttons to small wooden handles for tools. If a considerable volume of small parts finishing develops, then a dip-whirl or centrifugai coating machine should be installed. Here again the

LET OUR *Specialists* HELP YOU WITH YOUR OVEN PROBLEMS

It Costs No More and You Can Be Sure of Results

Put our engineers to work on your baking and drying problems. Their 150 years of combined oven engineering experience is your assurance that the oven they design for you will exactly meet your needs. Tell us your requirements and we shall be pleased to give you our recommendation. No obligation.

QUICK SERVICE

Continuous monorail conveyor oven for fluorescent light reflectors.

Write for Bulletin 951

MICHIGAN OVEN COMPANY

417 Brainard St. Detroit 1, Mich.

batch type oven is useful for baking the finish on loaded trays of these small products.

I have heard some custom finishers say, "Oh, we can't afford to install all of this mechanical equipment, especially conveyors. Our line is too diversified." Well, I don't see how they can afford not to have conveyors or some sort of mechanical handling equipment. There is a size and type of conveyor (some portable ones too) for every production need, and they are not too expensive when compared with the cost of manually handling parts and products from cleaning through various operations to completion, over an extended period of time.

The scope of the work and the potential volume of production will determine what equipment is needed for minimum requirements—but something more than this is desirable. Just because a shop is small is no sufficient reason for limiting its facilities to the point where almost every job will have to be done the hard and expensive way.

DuPont Man in N. C.

The DuPont Company's Finishes Division announces the appointment if William A. Bland as sales representative in western North Carolina. Mr. Bland will make his headquarters at the Finishes Division's field service laboratory at Greensboro, where his services will be available to the furniture industry in the area.

Mr. Bland has been with the DuPont Company for 22 years, 15 of which were spent in the finishes laboratory at Philadelphia. He was later in charge of the company's field service laboratory at Roanoke, Va., and for the past three years he has been servicing the furniture accounts in the Fort Smith and Little Rock, Arkansas areas.

VOLUMES OF SERVICE FOR YOU

Each volume above represents an individual member of the Solvents & Chemicals Group . . . America's leading distributors of solvents and chemicals. Whether you order by drum, tank wagon, transport or tank car, each Group member stands ready to serve you. Why not investigate the many advantages your nearby Group member offers?

THE SOLVENTS AND CHEMICALS GROUP ASSOCIATED FOR BETTER SERVICE TO INDUSTRY

OFFICES AND PLANTS IN

BUFFALO—BUFFALO SOLVENTS & CHEMICALS CORPORATION,
Box 73, Station B — Bedford 1572

CHICAGO—CENTRAL SOLVENTS & CHEMICALS COMPANY,
2545 W. Congress St. — SExley 3-0505

CINCINNATI—AMSCO SOLVENTS & CHEMICALS COMPANY,
4619 Reading Road — MElrose 1910

CLEVELAND—OHIO SOLVENTS & CHEMICALS COMPANY,
3470 W. 140th St. — CLearwater 1-3770

DETROIT—WESTERN SOLVENTS & CHEMICALS COMPANY,
8472 Selkirk Ave. — WAlnut 1-6350

FORT WAYNE—HOOSIER SOLVENTS & CHEMICALS CORPORATION,
Maumee & Baxter Rd. — ANthony 0213

GRAND RAPIDS—WOLVERINE SOLVENTS & CHEMICALS COMPANY,
1500 Century S.W. — Grand Rapids 5-9111

HOUSTON—TEXAS SOLVENTS & CHEMICALS COMPANY,
8501 Market St. — Orchard 6683

INDIANAPOLIS—HOOSIER SOLVENTS & CHEMICALS CORPORATION,
1650 Luett St. — ATlantic 1361

MILWAUKEE—WISCONSIN SOLVENTS & CHEMICALS CORPORATION,
1719 S. 83rd St. — GReenfield 6-2630

NEW ORLEANS—SOUTHERN SOLVENTS & CHEMICALS CORPORATION,
1352 Jefferson Hwy. — Temple 4666

ST. LOUIS—MISSOURI SOLVENTS & CHEMICALS COMPANY,
419 DeSoto Avenue — GArfield 3495

TOLEDO—WESTERN SOLVENTS & CHEMICALS COMPANY,
Central & Reynolds Rd. — Jordan 0781

WHERE TO FIND IT . . .

Putting Technical Information at your fingertips

Part of the complete catalog file system on solvents and chemicals offered by members of the Solvents & Chemicals Group.

"Knowing the right answer" is usually not nearly as important to industry as "knowing where to find it." Since it is well-nigh impossible for any laboratory or production man to remember all the technical information concerning the many solvents and chemicals used by industry, firms are supplying him with this information in many forms.

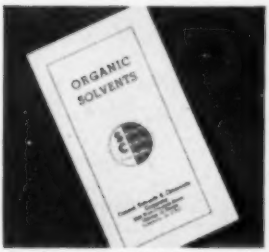
One of the foremost of those firms doing an outstanding job is the Solvents & Chemicals Group. This Group, with members in 13 key cities throughout the Midwest and South, furnishes a variety of easily filed information of vast help to the paint industry, metal-working industries, graphic arts field and to chemical compounders.

LOOSELEAF CATALOGS ON REQUEST

A prime example of the service furnished by the Solvents & Chemicals Group is their extensive catalog file system on individual solvents and chemicals. Individual data sheets on hundreds of products are available on request. These data sheets are then incorporated in individual file folders. For example, there are over 20 individual data sheets available in the file folder on petroleum naphthas, alone. File folders containing data sheets are available on such varied products as chlorinated solvents, alcohols, acetates, aromatic solvents, waxes, plasticizers and many others.

ORGANIC SOLVENTS HANDBOOK IS A FAVORITE

One of the most demanded pieces of literature published by the Group members is the Organic Solvents Handbook . . . a handy, pocket-size, 64-page booklet that discusses organic



The famous Organic Solvents Handbook requested by hundreds of solvent and chemical users.

Wall charts such as this one help research, production and laboratory men.

There's a wealth of information contained in these producer's pamphlets.

Specific catalogs from many manufacturers are available on request by users of their products.

solvents in non-technical terms. Thousands of requests for this booklet have poured in from every State in the union, as well as from numerous foreign countries. This pocket-size booklet is carried by paint and ink salesmen, and by production men in the coatings and metal trades. What's more, copies of it can be found in the libraries of most universities. Qualified readers can obtain copies of this booklet without charge by contacting their nearest Group member.

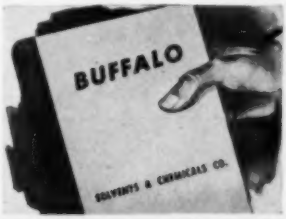
MANUFACTURERS' LITERATURE, TOO

In addition to the many pieces of literature that the Solvents & Chemicals Group publishes, it also has available a wide variety of informative literature published by the manufacturers it represents. The combination of information contained in the Group's own literature, plus the knowledge that can be gained from manufacturers' literature, enables the Group to offer information that will help solve almost any problem concerning the use of solvents and chemicals available from the Group.

Bound Together For Better Service

THE SOLVENTS & CHEMICALS GROUP

ALCOHOLS • ACETATES • KETONES • TERPENE SOLVENTS
WAXES • AROMATIC SOLVENTS • NAPHTHAS • CHLORINATED SOLVENTS • PLASTICIZERS • STEARATES
ROSINS • DETERGENTS • ALKALIES • GLYCOLS • AMINES



BOUND TO SERVE YOU

IN NEW YORK, IT'S BUFFALO SOLVENTS

In Fort Wayne, it's Hoosier Solvents. In New Orleans, it's Southern, and **in Buffalo** the name to look for is Buffalo Solvents. Buffalo Solvents each year, supplies more and more of leading solvents and chemicals to upper New York State and wide adjacent areas. Whether you make or use paints or clean metals . . .

whether you compound chemicals or use waxes . . . whatever you do that requires solvents and chemicals you can be sure of better service when you call on Buffalo Solvents.

BUFFALO
SOLVENTS & CHEMICALS CO.
BOX 73 — STATION B
BUFFALO, NEW YORK
Telephone: BEDFORD 1572

Baked Clear Coat Protects Chrome-Plated Auto Parts

THIS is a story about a system and equipment rather than one of men and materials. Due to the varying factors and conditions that affect manufacturing plants today it is not enough that a finishing setup be efficient; it must also be flexible—that is, capable of being changed or adjusted to different products and finishes. A splendid illustration of this may be found in a plant I visited recently.

In this new setup it is possible to clean and dry the metal surfaces, apply and bake a clear synthetic protective coat on chrome-plated pressed sheet metal parts—or, with the same number of operators, the

Electrostatic spray booth where two sets of three fixed spray guns coat products as they pass through two electrostatic fields—one line entering and one leaving the spray booth.

Clear coated products entering final bake oven No. 4 at right and leaving the oven at left.

same conveyor speed and the same equipment, they can clean and dry, apply and bake up to as many as four coats of finishing material on these same products.

BY P. C. BARDIN
Associate Editor

This setup includes a 4-stage cleaning operation, drying oven, electrostatic spraying to put on a clear synthetic coat, and oven baking, with a really effective automatic control system.

How is such a thing possible? By almost complete mechanization of every operation in the setup; reducing the variables and increasing automatic controls so that the work of operators who handle the system is simply one of *supervising equipment and materials rather than doing any physical work.*

All of the finishing equipment occupies only a relatively small space —about 70x60-ft. This includes an overhead monorail conveyor, a 4-stage power washer, dry-off oven, four electrostatic spray booths, three bake ovens and two control panels.

In order to eliminate some of the variables, the control and safety features of the system are interlocked

Looking up at zero-speed control mechanism.

between the conveyor, the operation of the rod-type radiant heaters in the ovens and the exhaust system.

The monorail conveyor—800-ft. in length—is driven through two balanced caterpillar, variable-speed drives. Trolleys are on 12-in. centers and hangers are on 24-in. centers. The conveyor has a zero-speed control which, in case of conveyor failure resulting from the fracture of a shear pin or for any other cause, can promptly stop the entire system before the finish on parts inside the ovens are damaged by overheating.

4-Stage Washer Cleans Chrome Surfaces

The power washer has four stages where solutions and water rinse are sprayed on parts from four sides at 12-lbs. pressure. For removing color buff, finger marks, dust and dirt from chromeplated parts the following procedure is used:

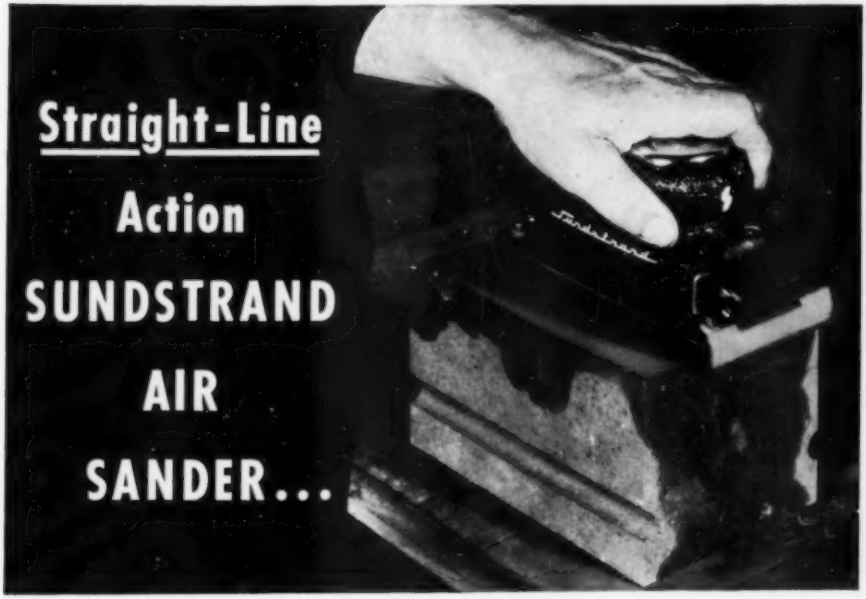
(1) Alkali solution (4-oz. to a gallon) at 165° F.
(2) Alkali solution (1-oz. to a gallon) at 150° F.
(3) Cold water rinse.
(4) Cold water rinse with 1/10 of 1% detergent added.
Note: Addition of a small amount of detergent reduces water spotting of surfaces.

I shall skip the dry-off oven and discuss all of the ovens including the dry-off oven later.

Finish Coating is Put on Electrostatically

Four water-curtain, electrostatic spray booths are designed for application of a prime coat, a clear base, aluminum slurry and a clear protective top coat, or any other combination of foundation and top coats that may be required. Any one or more spray booths may be cut out of the system along with any bake oven, without loss of the automatic control features of the system. The spray booths have a double 130,000-volt electro-static field and, of course, any number of spray guns may be used for coating the work.

All spray booths operate identically. The alkyd urea-resin-base clear synthetic is sprayed at 12 seconds viscosity at 78° F., as measured in a No. 4 Ford cup. Atomizing pressure is 15-lbs. and the fluid pressure only 2 to 3-lbs. For the clear protective coat, three guns operate as the products enter the spray booth. Loaded racks of parts are rotated mechanically at the rate of two complete revolutions per lineal foot of travel. As the racked parts reach the back section of the spray booth the rotation stops. Travel around the hairpin turn provides a 2-minute flash (air dry) period. Then, as the products travel to the front of the



...reconditions dies in 75% less time than required for hand polishing!

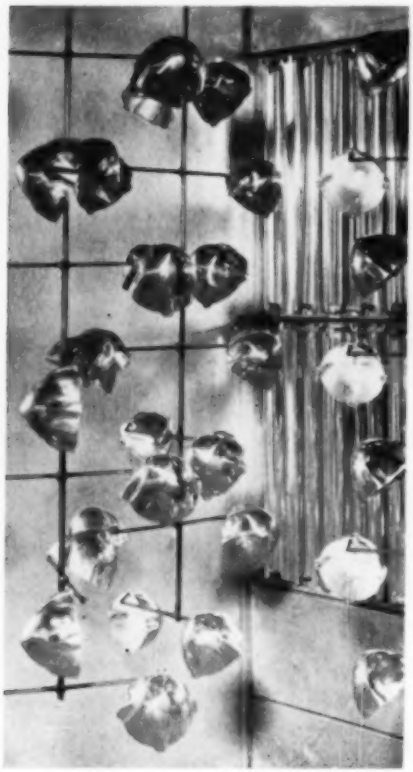
Heavy dies used by The Washburn Company for flattening the stainless steel shanks on kitchen tools must be highly polished, free from scratches. Otherwise, imperfections show up in the finished products and dies must be replaced more often. Now, the Sundstrand Single-Pad Sander machine polishes dies in 75% less time than required for hand polishing. For solutions to *your* sanding problems on wood, metal, or plastics, see your nearby distributor or write for Bulletin IF-6.

SUNDSTRAND

SUNDSTRAND AIR SANDERS

SUNDSTRAND MACHINE TOOL CO.

PNEUMATIC DIVISION, ROCKFORD, ILLINOIS



Inside the final bake oven No. 4 where the clear synthetic coating is cured by radiant heat from rod-type heaters—combined with convection heat. This is an insulated oven.

spray booth, they pass through a second identical electrostatic field where a second set of three fixed spray guns apply a second clear coat as the parts revolve.

A period of five minutes travel time is allowed between each electrostatic spray booth and the particular oven in which the coating is baked, to provide an adequate flash (air dry) period.

Electric Ovens Are Radiant Type

Oven No. 1 is a dry-off oven 72-kw., with air curtains to mechanically remove any remaining rinse water, plus radiant heat to dry the surfaces. Time, 3½ minutes; product temperature, 230° F.

Ovens No. 2 and 3 are identical bake ovens, 165-kw. each, equipped with air locks to seal convection heat at both entrance and exit. Time, eight minutes; product temperature, 315° F.

Oven No. 4, the final bake oven, 190-kw., also has air locks to seal convection heat at the entrance and exit. Time, 12 minutes; product temperature, 325° F.

Temperature controlled air is recirculated in ovens 2, 3 and 4. This air is heated by finned Calrod heaters.

Of the total floor area that comprises the finishing room, the ovens occupy only 620-sq.ft., and have only 220 lineal feet of conveyor. These ovens comply with the new Class A Standards of the National Board of Fire Underwriters for ovens and furnaces operating below 700° F.

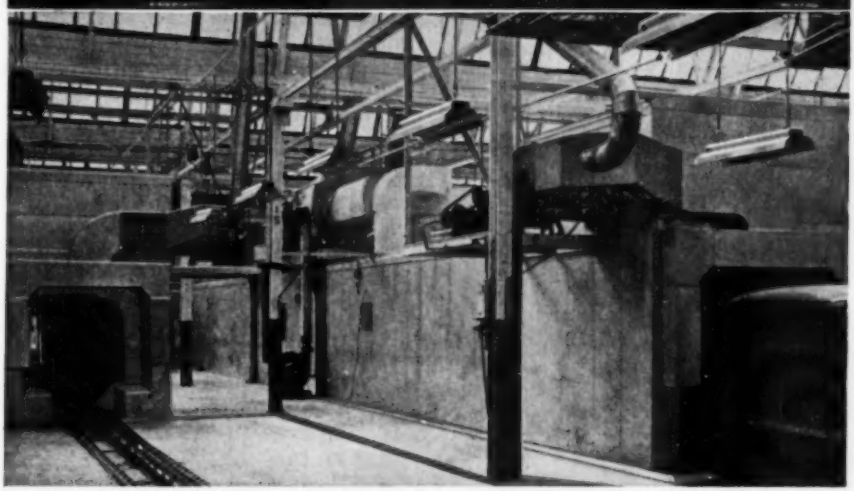
Side wall panels in the ovens open outwardly to permit external access to all wiring and heaters. This arrangement also provides explosion relief venting to minimize damage in case of an explosion, as required by Class A Standards.

Safety and Control Features Of the System

Other control and safety features included in the system are as follows:

An exhaust system must purge the oven atmosphere before the system can be energized. [*To 50*]

MORE PRODUCTION . . . SAME SPACE



AND A KOCH COMPLETE *Conveyorized* SYSTEM WILL FINISH IT BETTER!

KOCH BUILDS:

- BAKING OVENS
- SPRAY BOOTHS
- METAL WASHING EQUIPMENT
- COMPLETE FINISHING SYSTEMS FOR BOTH WOOD AND METAL
- AIR MAKEUP SYSTEMS

What more could you demand in these days of high labor and material costs? KOCH's single responsibility for your finishing system — whatever your product — assures top quality production at such efficiency that it often pays for the complete system in a matter of months!

PHONE, WIRE OR WRITE TODAY!

GEORGE KOCH SONS, INC.
EVANSVILLE, INDIANA

CARL-MAYER OVENS

Carl-Mayer exclusive design and patented features ensure the most efficient operation and outstanding fuel economy. Many installations.

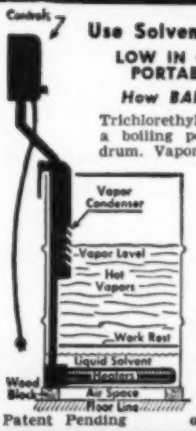
Write for Bulletin No. 350

Enamel Drying, Japanning, Lacquering, Ceramic Drying

THE CARL-MAYER CORP.
3030 Euclid Avenue Cleveland, Ohio
Over 30 Years' experience

MOST REVOLUTIONARY DEGREASER DEVELOPED!

BAR-L* Vapor DEGREASER



Use Solvent Drum for a Tank!

LOW IN COST—ECONOMICAL PORTABLE and PRACTICAL

How BAR-L Degreaser Works

Trichlorethylene solvent is heated to a boiling point in lower section of drum. Vapors condense on work and wash off oil, grease and dirt. Most parts can be cleaned in seconds! Solvent vapors are kept **inside the drum** by a scientifically-designed condenser which returns solvent to boiling chamber.

REMEMBER: Anything that can fit into a solvent drum can be cleaned in a BAR-L Degreaser! And it's priced right!

Write for details on other "MP" Degreasers.

* Patent Pending

Manufacturers Processing Co.
METAL CLEANING CHEMICALS AND EQUIPMENT
1381 HILTON ROAD DETROIT 20, MICHIGAN

Ovens are pre-heated to operating temperature on each start for approximately three minutes. This precaution assures correct curing of the finish.

If the exhaust system on any oven fails, the electric current is automatically cut off from the heater rods to prevent damage to the oven load. A signal light on one of the central control panels indicates the location of any exhaust fan failure.

Any oven or combination of ovens can be used without loss of automatic control and safety features.

Bake ovens 2, 3 and 4 each have automatic temperature controls and high temperature safety protection which trips the main circuit breaker for the oven in the event of excess temperature that might result from a no-load condition or thermostat failure. The oven cannot be re-energized until the circuit breaker is manually reset.

To assure positive operation, all exhaust fans are interlocked to the control system through governor-type switches on their respective wheel shafts.

The system is almost foolproof. Workmen do not have to remember what to do under certain conditions or in certain emergencies. These things are automatically controlled and operated.

Metals Disintegrating Appoints Knolke Sales Representative

The appointment of Louis A. Knolke as sales representative for the Harrison Abrasive Division of Metals Disintegrating Co., Inc., Elizabeth, N.J. and Manchester N.H., is announced.

Mr. Knolke will represent Harrison Chilled Shot and Harrison Diamond Grit in the New Jersey and Pennsyvania area, and will be available for consultation on all types of problems concerned with the use of metal abrasives.

Use of Non-Skid Paint a Safety Precaution

NON-SKID paint, such as is used on certain areas inside military tanks to prevent crew-men from slipping, may be used in industrial plants to accomplish the same purpose.

This paint differs from ordinary architectural paints in that it contains pumice stone. Comparatively small quantities are mixed at a time and it must be kept under constant agitation in order to keep the pumice stone in suspension. If the paint is sprayed, special spray gun nozzles must be used to prevent excessive wear due to the abrasive action of the pumice. Spray gun nozzles, such as are used for spraying vitreous porcelain enamels, may be used.

The use of non-skid paint is desirable, as a safety precaution, on oiled or worn wooden stairways and floors, and on smoothly finished concrete stairways.

Non-skid paint may be obtained in white and various colors so that coated areas can be readily identified. If stairways are inclined to be dark, white paint on the treads is recommended. Where plenty of light is available the treads may be painted gray or green, with perhaps a stripe 1¼-in. to 2-in. wide painted along the front edge. This will more readily identify front edge of the tread.

This type of paint is also useful around dip tanks and power washers, where concrete floors may be wet due to water or solutions dripping off products immersed in the tanks. It

NOW!

A QUALITY HAMMER FINISH FOR AS LITTLE AS $2.50 A GALLON

Here at last is a genuine, high-quality hammer finish at a cost comparable to ordinary finishes! Hammercraft Type C is easy to spray, can be baked or air dried. Large hammer effect possible on vertical surfaces. Overspray doesn't materially affect pattern.

(Delivery in West, slightly higher)

For details and sample send coupon to

HILO **VARNISH CORPORATION**
376 3rd ST., EVERETT, MASSACHUSETTS
Industrial Finishes Division of Carpenter-Morton Co.

NAME.....

ADDRESS.....

CITY and STATE.....

may also be sprayed on the top surface of metal gratings surrounding the dip tank area, as this metal becomes extremely slippery when wet.

Non-skid paint will help to keep employees on their feet.

H. E. Druce is I.S.R. for DuPont in Tennessee

The DuPont Company's Finishes Division has appointed Henry E. Druce as industrial sales representative in Tennessee. His headquarters will be in Chattanooga, where his services will be available to the manufacturers of the Chattanooga and Nashville areas.

Mr. Druce has had three years' production experience in DuPont plants and worked in the finishes laboratory for ten years. For the past five years he has been on the staff of the industrial sales manager in Wilmington, Del., where he dealt with a variety of finishing problems. He is a chemical engineer graduate of Drexel Institute, Philadelphia.

Dolan To Visit European Paint Associations

V. J. Dolan, president of V. J. Dolan & Co., and Mrs. Dolan are making an extensive tour of Europe. They will spend some time in practically all of the Free Countries.

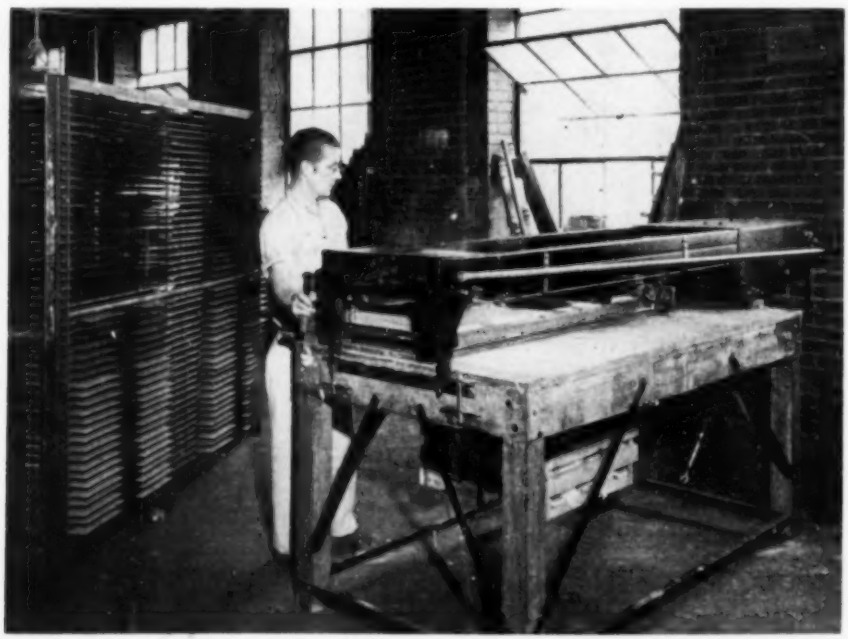
While in Europe Mr. Dolan plans to visit some of the outstanding industrial finishing materials manufacturers. He has received invitations to visit the National Paint Federation in London, the Research Association of British Paint, Color and Varnish Manufacturers at Teddington, Middlesex, England and the Societe Des Vernis Pyrolac at Cretell, France.

Hercules New Chemical Plant

Hercules Powder Co. will build its new hydrocarbon chemicals plant on a 275-acre tract near Gibbstown, N. J.

The new plant will be located on the Delaware River, slightly Northwest of Gibbstown, and will represent an investment of about 8 million dollars.

The plant will produce phenol, paracresol, acetone, and cymene alcohols.



Shop view of a modern-type, precision, silk-screen process printing machine in operation.

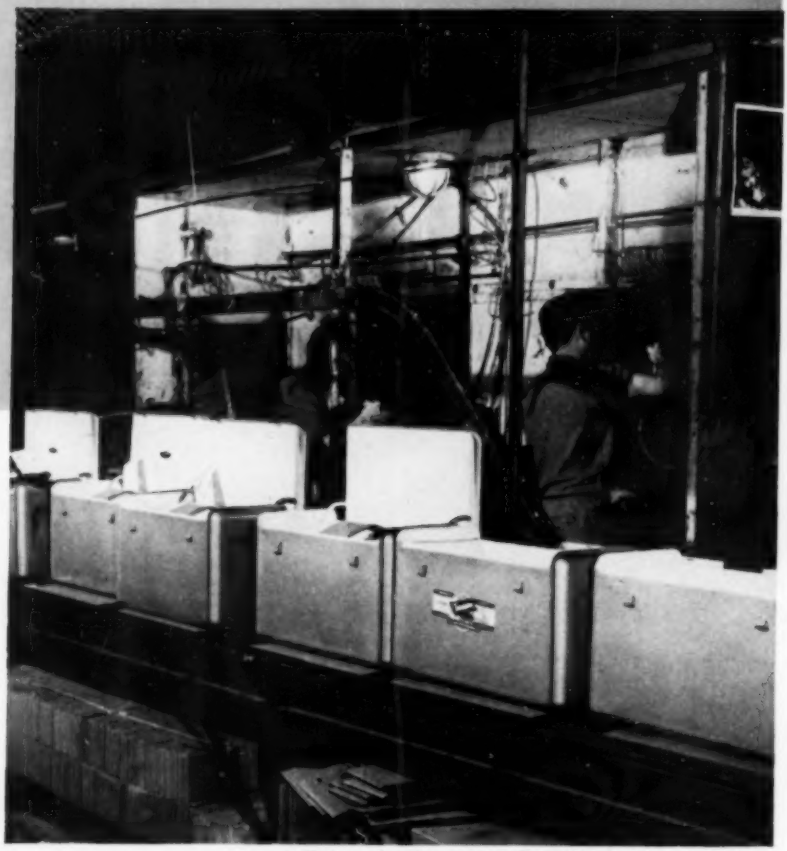
Clear Metal Lacquers

Maximum Adhesion to

ZINC, BRASS, COPPER and SILVER

THE CLINTON COMPANY

1210 ELSTON AVENUE • CHICAGO 22, ILLINOIS



• Poloron's Thermaster Portable Refrigerators pass through spray painting booths where they are sprayed with Pittsburgh's Hammerhide Finishes on the exterior. Interiors are finished with gleaming, blue-white baked enamel. Poloron also produces a Woodland model which has Pittsburgh Wrinkle Finish on the exterior.

PPG PITTSBURGH

PAINTS • GLASS • CHEMICALS •

PITTSBURGH PLATE

Picnic Products by Poloron

Are Protected with Attractive

PITTSBURGH FINISHES!

Special Polychromatic Enamels and Wrinkle and Hammerhide Finishes give these portable units added beauty and longer life

● **Since 1928,** Poloron Products, Inc., of New Rochelle, N. Y., has manufactured picnic ice boxes, vacuum jugs and other outdoor items to meet the needs of millions of vacationing and picnicking Americans.

● **Pittsburgh Finishes** have proved ideal in making these unusual products look better and last longer.

● **Poloron's** Thermaster Portable Refrigerators are sprayed with Pittsburgh Hammerhide Finishes. Interiors are finished with gleaming, blue-white baked enamel. Its Woodland model has Pittsburgh Wrinkle Finish on the exterior.

● **Poloron** also produces Woodland feather-weight vacuum jugs in one- and two-gallon sizes, as well as one-gallon Thermaster bottles. The Woodland jugs are sprayed with Pittsburgh's Green Polychromatic Enamel and the Thermaster bottles are coated with Gray Hammerhide Finish.

PITTSBURGH PLATE GLASS CO., Industrial Paint Div., Pittsburgh, Pa. Factories: Milwaukee, Wis.; Newark, N. J.; Springdale, Pa.; Atlanta, Ga.; Houston, Texas; Los Angeles, Calif.; Portland, Ore. Ditzler Color Div., Detroit, Michigan. The Thresher Paint & Varnish Co., Dayton, Ohio. Forbes Finishes Division, Cleveland, Ohio. M. B. Suydam Div., Pittsburgh, Pa.

FREE ADVISORY SERVICE

Poloron Products, Inc., is just one of the many manufacturers with whom Pittsburgh's technical staff has worked to develop highly specialized finishes. This broad experience may be helpful in saving you time and money. Write, wire or phone the Pittsburgh Paint plant nearest you. We'll be glad to have one of our engineers discuss your finishing problems with you at no cost or obligation.

PAINTS
BRUSHES • PLASTICS
GLASS COMPANY

Final hand rubbing.

The Starck Piano Finish

By PETER DEPROSPERIS
Finishing Foreman, P. A. Starck Piano Co.

THE finish is definitely an important part of every piano. One listens to a piano when it is being played, but the finish is always visible. It must be as deep and clear as the tones which come from within the instrument.

In our plant piano cases are made up in lots of fifty. When the cases arrive in the finishing room, these lots are broken down into lots of ten which are then finished to match. Our regular finishes include Old World Mahogany, brown mahogany,

blond or bleached finishes, and pigmented enamels. Then there are the special woods and finishes on custom orders to match wall paneling in play rooms or music rooms.

Foundation Coats for Mahogany Finish

I will give you the procedure, step by step, in finishing a typical Old World mahogany piano case. First a NGR stain is sprayed on. This stain is allowed to dry for two hours. Next we spray on a wash coat which is made up in the proportion of three gallons of alcohol to one gallon of 4-lb. cut shellac. This wash coat is allowed to air dry for 1½ to four hours before it is sanded with fine sandpaper. Then the surface of the case is blown clean and tack ragged. A black filler material is well brushed over the surface, then padded in and wiped off with jute.

The surface and all corners are thoroughly cleaned and the case is allowed to air dry overnight. All end wood surfaces are shaded with a lacquer shading stain. This is allowed to dry from ½ to two hours—sometimes longer. The entire case is sprayed with an orange tinted translucent lacquer of 21% solids content. After air drying for three hours, the case is sanded with No. 5/0 sandpaper.

What goes into a piano finish that's guaranteed for 10 years

A glaze coat made up of burnt umber, japan and oil (prepared and supplied by a finishing materials manufacturer) is brushed on and wiped off to highlight the case. We find that brushing gives us better control in this operation and there is less wiping off to do afterward. The glaze coat is allowed to dry for two hours. [*Continued on page 62*]

View in spray room. Photograph, courtesy of Morrill & Renshaw, Inc.

Whether your operation is large or small, you're looking for the most economical way to solve your finishing problems. At Reliance, our 30 years of developing fine finishes has given us the "Know-How" to create and deliver finishes that produce best results at lowest cost.

Reliance customers, of course, know this fact and have seen it operate to their advantage and profit. We are anxious for an opportunity to help you too. If you have a finishing problem feel free to consult us without obligation.

Address 4732 Crittenden Drive,
Louisville, Kentucky

Rely on Reliance

RELIANCE VARNISH CO., INC.

AFFILIATED FACTORIES IN

LOUISVILLE, KY.

ROCKY HILL, CONN.

BILLY BOND says:

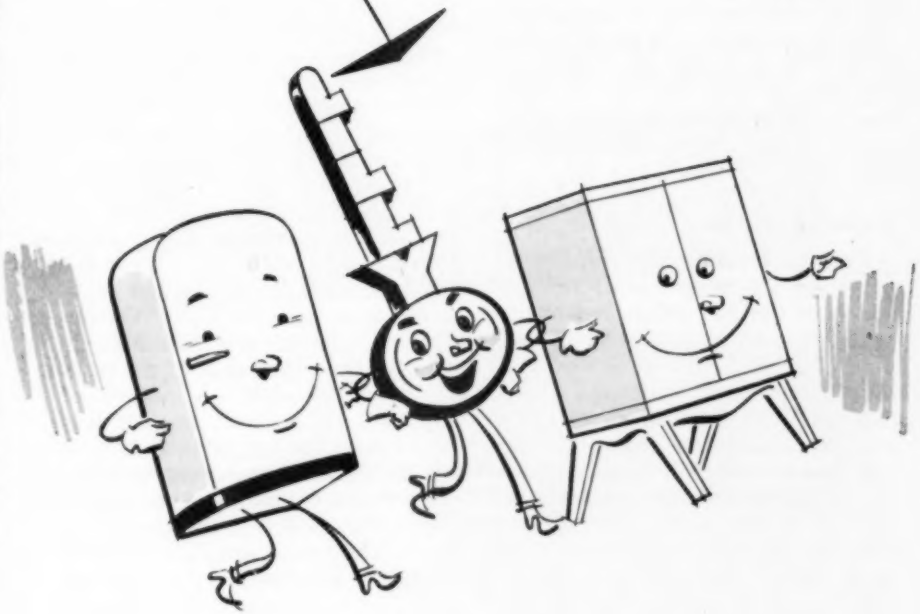
June is the month for Brides (and Bridegrooms) and I don't know any better way to start married life than with a backlog of Defense Bonds. A good sizable backlog of these ***dependable*** bonds will help pave the way to a happy, successful future . . . . and Payroll Savings is the easy, sure way to build up this backlog.

THE Lilly COMPANY

FINE ES

High Point, N. C.

BILLY LILLY says:



It makes no difference whether it's the month of June or December .... there's no better way to start your products away from your plant than to have finished them with Lilly's ***Dependable*** Finishes. And there's no better way to assure a successful future for them because, "The Key to the right finish" always assures you that—

"With the Right Finish—You'll Finish Right."

THE Lilly VARNISH COMPANY

FINISHES

Indianapolis, Indiana
Gardner, Mass.

Three Coats of Clear 27% Solids Lacquer

The case is now ready for the first of three coats of clear 27% solids lacquer. The first two coats air dry overnight before the case is sanded, each time, with No. 5/0 sandpaper. The third or top coat of lacquer air dries from one to two weeks before the case goes to the rubbing room. We must be sure that the multiple-coat lacquer finish is thoroughly cured before we begin rubbing operations.

Rubbing and Polishing

Preliminary rubbing is done with portable air-driven machines on which we use No. 280-A, wet-or-dry sandpaper, with soap and water as a rubbing lubricant. This first rubbing is followed by rubbing with No. 360 wet-or-dry sandpaper, also using soap and water as a lubricant. Finally the surfaces are rubbed with No. 4/0 steelwool pads with No. 4-F pumice. Now the case goes to hand rubbers who rub mouldings, ends, close places where the rubbing machines cannot reach, and do any touch-up rubbing that is needed.

The various finished parts are moved to our assembly room, where the piano is assembled. After assembly, each piano is returned to the hand rubbers for a final rubbing with No. 400 wet-or-dry sandpaper. Here again the rubbers use a soft jelly of neutral soap and water as the rubbing lubricant. Rubbing, of course, is followed by a thorough cleaning up and drying. A coat of carnauba wax with silicon added is ragged on and allowed to dry to a grayish color before it is wiped off and the surface is polished.

I mentioned before that the finish becomes an essential part of the piano. Our pianos are guaranteed for ten years against defective materials or workmanship. As you know, a piano has large flat surfaces which magnify any defect in the wood or finish, therefore we must exercise extreme care in all of our surface preparatoin and finishing operations. You may be interested to know that before any lacquer is accepted it must pass our laboratory cold check test.

We use test panels ¾-in. thick by 12x12-in. Each one is coated all around, including all four edges, with one coat of lacquer. Then the face of the panel is given our regular finish as just described. The finished test panels are placed in an oven for two hours at 140° F., every day for three weeks. At the end of this period the panels are put in a deep freeze for one hour at 10° below zero; then they are removed and remain at room temperature for one hour. This cold test represents one cycle. The panels are given 12 such cycles. If the finish shows any evidence of cracking or crazing, the lacquer is rejected.

Testing the finishing materials is highly important; however, that is only part of the job. Regardless of how good the materials may be, the workmanship must be practically perfect, and time allowances for proper drying must be adequate. The original surfaces must be sanded perfectly smooth and they must be clean; then follows correct application of the right materials, sufficient drying time, and finally, careful rubbing and polishing. All of these factors are required to turn out a high quality piano finish.

Rich, Super Satin Finishes

THE GILBERT SPRUANCE CO.

Philadelphia 34, Pa. Winston-Salem, N. C.

FRENCH PROVINCIAL FINISH

The Gilbert Spruance Company designed and created the quality materials for the finish of the chest illustrated. It is a part of a suite which was the sensation of the furniture show, and proved the "conversation piece" of that occasion.

We consider ourselves an actual part of the furniture industry, and have always been leaders in the designing of new and distinctive furniture finishes.

Among our customers are some of the largest and most successful furniture manufacturers in the East and South.

May we collaborate with you in devising the finishes you require? Our laboratory is at your service.

Courtesy of
B. F. HUNTLEY FURNITURE CO.
WINSTON-SALEM, N. C.

Our long experience — is at your disposal.

Pigmented Toners Used to Produce Light Finishes

BY H. W. CHESTER

THE demand for light colored finishes, such as blond, sea foam, wheat, etc., has so increased in the last three or four years that today I believe fully 75% of all modern furniture is finished in light colors.

Because of the limited number of natural grown light woods and because bleaching does not always fit in readily with a fast finishing schedule, a number of furniture manufacturers have turned to pigmented toners to produce their light colored finishes.

Most of the pigmented toners are made from low-solids alkyd-type water-white lacquer-base materials, to which pigments tinted in various colors are added. In order to prevent yellowing and discoloring of the finish with age, it is necessary to use only the best water-white, non-yellowing lacquers in these materials.

Lacquer Toners and Shellac Toners Used

In addition to lacquer toners now in use there are also pigmented shellac toners on the market. These may be purchased in either white or colors. Some finishers prefer using pigmented shellac toners on "sea foam" or other light mahogany woods because they tend to prevent any later "bleeding" through of the natural red dye or oil in mahogany woods. When or if such bleeding occurs, it will show in the final finish after it has aged.

The effect produced by a certain specified amount of solids and degree of opaqueness in pigmented toners will vary, depending, of course, on the type of veneers and solid woods on which they are used. Some woods are more difficult to cover than others.

Coverage of Mahogany to Prevent Bleeding

On mahogany it is necessary to have a very opaque material because the wood must be well covered to prevent any bleeding through of mahogany's natural red color. Bleeding would cause pink spots to appear in the finish.

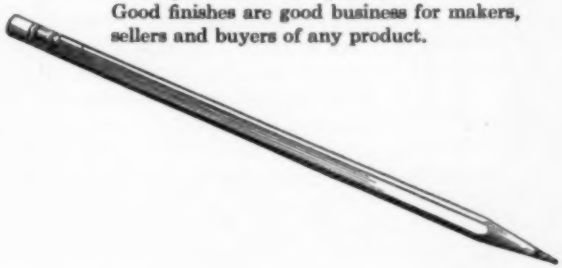
In order to do a good job it is generally necessary to apply two coats of pigmented toner on mahogany woods. This will cover the wood thoroughly and evenly. It will also give enough body on the work to allow sanding before filling and, of course, no wash coat will be needed.

Treatment for Walnut; Oak; Korina; Maple and Birch

On walnut and other shallow-pore woods, one coat of an opaque toner is

Said the pencil to the washing machine . . .

"We're brothers on the surface."
Attractive appearance and durability of finish
are important in both products.
Good finishes are good business for makers,
sellers and buyers of any product.



ZAPON

"SERVICE FROM EVERY ANGLE"

Large or small, simple or complex,
your product will profit from a ZAPON finish.
ZAPON "Service From Every Angle"
provides the best finish from specification to application.
ZAPON Finishes are "custom-tailored" to the product.

ATLAS POWDER COMPANY • WILMINGTON 99, DELAWARE

for Industrial Finishes • Stamford, Conn. • North Chicago, Ill.

usually enough. This coat of toner is followed by a thin clear wash coat such as a 4% solids bleaching lacquer. If too much toner and wash coat are applied to walnut and similar grained woods, a poor filling job will result, because the wood pores become so shallow that they will not hold filler.

On light-colored veeners such as Korina, ash, oak, etc., it isn't necessary for the pigmented toners to contain as much pigment, because these woods are not as difficult to cover as walnut and mahogany. One coat of toner is all that is necessary. This is followed by a low-solids wash coat.

Woods That Haven't Large Pores—Birch, Maple, etc.

On woods that have no pores to fill, such as birch and maple, the pigmented toner should have just enough hiding capacity to produce the desired color and, of course, to equalize the over-all color. However, some of the grain of the wood should show through the toner, so as to avoid giving a painted appearance to the finished product.

It is best to spray a thin water-white low-solids wash coat over the toner so that it may be sanded. This will also prevent the subsequent coat of glazing stain from spotting in any soft areas in the wood. Since these hardwoods (birch and maple) have no pores in the grain, it is always best to use a glaze stain instead of filler over the toners.

"Gads, what a lousy finish; good thing I brought along my portable spray outfit."

Wire Brushing Cleans Pores; Fillers of Contrasting Color

On those woods that require filling it is often necessary to wire brush the pores of the wood with a soft fine brass wire brush before the pigmented toners are applied. This will clean out the pores deeper and therefore make filling easier.

Fillers of contrasting colors are often used over pigmented toners. Some of these fillers are lighter in color than the toner, while others are darker than the pigmented toners used under them. For instance, a tan, brown, gray or black toner and a white filler can be used, or a white, gray, green or wheat toner may be used with a brown or black filler.

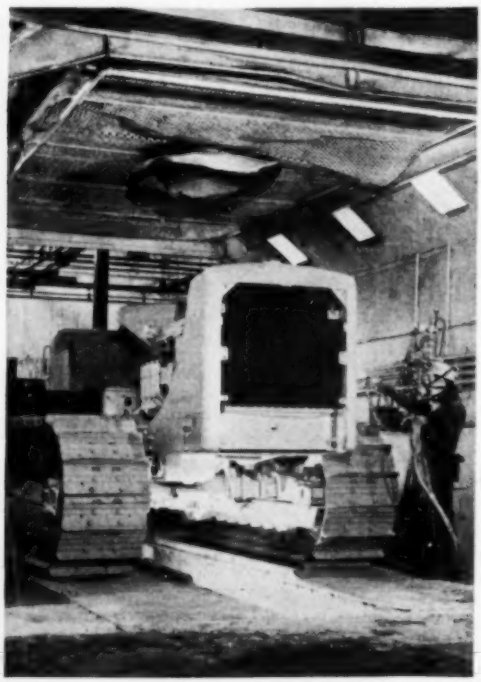
In any event, pigmented toners have been a life saver for the wood finishing industry, in its efforts to produce large quantities of light colored finishes; and it looks as though these toners will be in even greater demand in the future because the trend toward light color finishing is growing.

here's how Nacromer
A PEARLY PIGMENT
is being used by
fishing lure manufacturers
Nacromer adds a pearly lustre and brilliance to wood or metal to catch the eye of the fisherman as well as the fish.
Yes, from a fishing lure to a refrigerator, Nacromer will add to your product a brilliance almost comparable to natural pearl essence at a fraction of the cost. Write for details and working sample today.
THE MEARL CORPORATION
153 Waverly Place New York 14, N. Y.
"World's Largest Producers of Pearl Essence"

SALES. The colorful, sparkling DULUX finish on this tractor helps promote a sale in a dealer's showroom.

PROTECTION. DULUX Tractor Enamel has the toughness to take hard knocks on the job . . . keeps its good looks despite years of outdoor exposure.

PRE-TEST. This guillotine-like device is one of many that help Du Pont develop finishes with high impact-resistance.



OUTPUT. The performance of DULUX helps a tractor manufacturer keep finishing time at a minimum while producing a finish of maximum durability.

DULUX does

REG. U.S. PAT. OFF.

all-round job for tractors

DULUX Tractor Enamel is one of the many Du Pont finishes that have helped manufacturers turn out better products—faster—more economically. In the last twenty-five years, Du Pont chemists have developed more than 12,000 special-purpose finishes like this to serve a wide variety of industries.

Looking for a way to cut *your* manufacturing or maintenance costs? Looking for a finish that will make your product look better, sell better, last longer? You can get expert help on *any* finishing problem by contacting the Du Pont Finishes sales technician in your area . . . or by writing E. I. du Pont de Nemours & Co. (Inc.), Finishes Division, Wilmington, Del.

Du Pont Industrial Finishes

Chemically engineered to do the job *better*

DU PONT

REG. U.S. PAT. OFF.

150th Anniversary

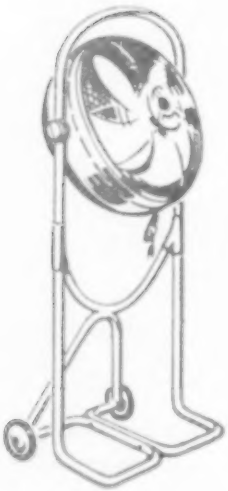
Better Things for Better Living
. . . through Chemistry

DUCO AND DULUX ARE REG. U. S. PAT. OFF.

Production Finishing of Electrical Equipment

By BRUCE ROBERT
Process Control Supervisor for
The Emerson Electric Mfg. Co.

WE MANUFACTURE and finish parts for many types of fans, heaters and motors. We use several different metals, such as iron, zinc and aluminum castings, sheet steel and sheet aluminum. Some parts require only priming; others receive a smooth gloss enamel or wrinkle finish. Three methods of applying coatings are used — dipping, hand spraying and automatic spraying.



Finishing—A Part of the Production Line

Because of the great number of different kinds of parts—most of which are relatively small and which require diversified finishes—a single centrally located finishing room is impractical. To convey these parts from their various production lines over varying distances to a central finishing room, would be slow and costly; so instead of taking the parts to a finishing room, we take the finishing room to the parts.

We have a pressurized finishing room (see the illustration on page 72) for applying certain finishes on specific parts, for instance, on parts for electric fans. A new trichlorethylene vapor degreaser or a 3-stage power-washer, with self-contained conveyor and built-in dry-off oven, is

One of the washers located at the end of a production line. Parts are cleaned and dried on the self-contained horizontal conveyor. The washer is complete with dry-off oven built in.

located close to the end of parts production lines, where such parts are to receive coatings. Parts from the line go directly through the metal cleaning operations, then to our waist-high spray booths located just beyond the washer.

Some of these small spray booths are shown in one of the pictures included in this article.

Metal Cleaning . . . . Dry-off Oven

An oven conveyor belt passes by the spray booths, within convenient reach of each operator. In some instances a metal cleaning and finishing setup is located at the end of two production lines of different kinds of parts, to clean and coat parts coming from these lines.

All of the oven conveyors from the finishing units carry parts to an extremely high infra-red gas oven. In other instances we use castered trucks, tiered trucks, and bulk tote boxes which are handled by power lift trucks. The type of work to be performed, in conjunction with time and motion studies, determines the handling method and equipment we use.

At the end of one of our production lines we have a metal cleaning unit and a vertical-spindle automatic spray machine. As parts are

removed from the spindles the operator places them on a horizontal conveyor which carries them through a gas-fired convection oven adjacent to the spray painting machine. They are removed at the exit end of the oven and placed in castered trucks for delivery to assembly lines or to the parts stock room.

By now you must be wondering why this somewhat lengthy description of decentralized finishing. For our particular purposes it has proved to be advantageous. Also it brings out a point that may be particularly helpful to many of you; that is, the standardization of various types and kinds of finishing materials. All baking conveyors operate at the same speed. All finishing materials—primer, gloss and wrinkle enamels, in all colors —are formulated so that they will properly cure in 22 minutes at an oven heat of 300° F. Some people said it couldn't be done, but our laboratory, working in conjunction with suppliers' chemists, exploded this theory. It can be done.

Electric Fan Bases Coated With Wrinkle Finish

One of the toughest problems we had was to work out a satisfactory black wrinkle enamel for use on certain types of electric fans. We wanted one that would form the wrinkle pattern and cure within the standardized time and temperature. Of course, formulation of the wrinkle enamel is the first step toward obtaining the required uniform wrinkle pattern which must be formed and cured in the specified time and heat.

The second important step toward securing uniformity of the wrinkle finish pattern is to have consistently controlled conditions in

Pressurized spray finishing room. As parts are spray painted the operators place them on racks of overhead conveyor which carries them through an infra-red gas-fired baking oven.

HOT Lacquer NEWS

PUBLISHED PERIODICALLY BY HERCULES POWDER COMPANY IN THE INTERESTS OF BETTER FINISHES AND FINISHING

Twin Coach Lacquers "Convertibles" for Army with One Hot-Sprayed Coat

Kent, Ohio, Plant Avoids Thinning, Cuts Finishing Time and Costs

Motor coaches manufactured for the military, that can be converted from ordinary passenger vehicles to first aid or trucking use, have joined the growing list of military items now being finished with hot-spray lacquer. Here's why: only one coat needed, application time cut in half, finish is smoother, flow-out is better, blushing is eliminated, and solvents are saved.

Cellulose Products Department

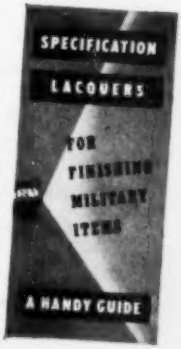
HERCULES POWDER COMPANY
INCORPORATED
928 Market Street, Wilmington 99, Del.

Hot spraying of Army coach convertible under way at Twin Coach Co. plant.

Bus bodies being made ready by cleaning, masking and priming before hot lacquer spraying.

Specification Lacquers for Finishing Military Items

Learn more about lacquer for defense finishing. Send for this handy guide to specification lacquers that helps you decide which finish you will need in performing government contracts. Specification numbers are listed, as well as an index to uses.



CL52-3

timing, application and baking. The system about to be described is consistently used without deviation.

Fan parts go through a power washer in which an acid phosphate cleaner is sprayed on at 180° F.; this is the first stage; then follows two hot water rinses at 180° F. Parts then go through a direct gas-fired dry-off oven wherein the heat is maintained at 400° F. The reason for the relatively high temperature is to force out any oil or moisture that may be entrapped in the pores of the metal.

After they have become cool, all cast parts of fans are carefully examined and any cavities are filled with putty. The putty glaze dries for two hours at 400° F.

Sufficient cooling time is allowed before the clean and putty glazed fan parts are taken to the pressurized spray room. Here, the black wrinkle enamel, at a viscosity of 90 seconds at 78° F., (measured in a No. 4 Ford cup), is sprayed with an atomizing pressure of 70-lbs. and fluid pressure of 20-lbs. As the parts are coated they are placed on the oven conveyor where they travel for ten minutes (flash drying period) before they enter the infra-red gas oven where the finish is cured and the wrinkle pattern is formed in 22 minutes at 300° F.

After leaving the oven the fan parts travel a sufficient distance to permit cooling and are inspected as they are removed from the conveyor. They are then wrapped with paper for protection of the finish before they are sent to parts stock. Uniformity of wrinkle pattern is absolutely essential because fan parts finished at widely different times are finally assembled into completed fans.

REPRINTS AVAILABLE

"HOW MUCH IS A GALLON OF PAINT WORTH"

as published in the August, 1950, issue of this magazine.

PRICE 10 CENTS PER COPY— Stamps Accepted.

INDUSTRIAL FINISHING Magazine

1142 N. Meridian, Indianapolis 4, Ind.

Mich. Oven Co. Appoints Man for Indianapolis Area

H. O. Bennett, Anderson, Ind., has been appointed by Michigan Oven Co., Detroit, Mich., as its representative in the Indianapolis area and portions of Ohio and Kentucky. A graduate of Purdue University, Mr. Bennett was for five years process engineer for an automotive manufacturer and for 14 years he was an industrial representative for a combustion firm.

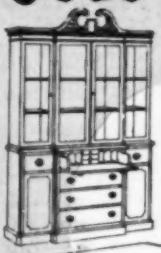
Kirk & Blum Honors Its Long Time Employees

Almost 1200 years of service with The Kirk & Blum Mfg. Co. were commemorated recently at a dinner when the Cincinnati dust control system manufacturer honored 40 employees who have been associated with the firm from 25 to 44 years. Each person received a suitably engraved gold watch.

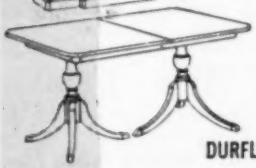
The longest service record in the group is held by a foreman, T. W. Thiery, who joined the firm on June 1, 1907, just three weeks after it was founded by the late Sylvestor Kirk and Richard J. Blum. The fact that the company had just passed its 45th anniversary was also noted at the dinner.

The men honored at the dinner returned the compliment with a set of matched luggage, presented to the firm's president, Richard J. Blum, Jr.

BARRETT'S new DURFLEX LACQUER
Greatly exceeds Industry Standards for
COLD CHECK RESISTANCE!



BARRETT'S DURFLEX LACQUER with its companion DURFLEX SEALER provides a tough, durable and flexible finish with proven ability to withstand long periods of storage in wide temperature extremes. In actual tests, DURFLEX showed no checking after 25 complete cycles under temperatures ranging from + 110° F. to — 6° F.



DURFLEX offers the combined advantages of high quality and low cost for finishers of Radio and TV Cabinets, Desks and other fine furniture. Like other high quality lacquers, DURFLEX dries to handle in two hours, and can be rubbed after an overnight drying. Most important, DURFLEX SEALER powders quickly and does not gum the sandpaper.

Available in sheens from dead flat to high gloss, BARRETT'S DURFLEX LACQUER is the ideal finish for your finest pieces. At the same time, its low cost will enable you to use this superior finish throughout your production schedule.

FREE SAMPLE
Try BARRETT'S DURFLEX SEALER and DURFLEX LACQUER in your own plant at our expense. Write on your company letterhead for free samples. Please specify sheen desired.

Other Fine BARRETT Finishes Include:
WONDERFLAT LACQUER
WONDERHOT LACQUER

Barrett Varnish Company
1532 S. 50th COURT CICERO 50, ILLINOIS

a complete line of dependable industrial finishes since 1870

Put Holeless Beads on Tape

Referring to one of the "Letters from Readers" in May issue, page 92, the positioning of holeless beads to be coated with pearl lacquer can be accomplished easily—even on a conveyorized heavy production basis—by laying them on masking tape (adhesive side turned up, of course). Use widths of tape to suit your convenience. I suggest spraying; spray straight toward the tape (at right angles to it) to avoid blowing beads loose, and use reasonably low air pressure.

When this coating is dry, lift the beads, turn them over and place coated side against tape so you can spray the previous contact area (under side) which could not be coated at the first spraying.

There may be a few "bugs" in your first setup, but they can be worked out.—*R. O. Meirers.*

For Coating Small Parts

We would like to know if you could recommend to us any literature on bulk painting of brassiere parts and shoe buckles. Because the brassiere parts are flat and can nest, they are difficult to paint.

We were told that you had an article on the subject about a year ago. Can you recommend any job painters who could do large volumes of this work? Thank you for your help.—*T. Mfg. Co.*

In a letter we are naming manufacturers of equipment for this work and also the names and addresses of several custom and commercial finishers. —*Editor.*

Want Coil Stock Coated

Would you please furnish us with the address of the firm that has facilities for coating coil stock in continuous strip? The concern was listed as M. M. Young & Co. in the May issue of *Industrial Finishing*, on page 88.—*J. Pattern Works.*

Information supplied.—*Editor.*

Where's a Testing Lab.?

This inquiry refers to the second editorial, starting on page 114 of March issue of *Industrial Finishing*, entitled, "Test Your Products Before You Sell Them."

The latter part of the third paragraph of this editorial reads, "There are several reputable commercial testing laboratories scattered over the country, any of which is equipped to test products, both in the laboratory and with consumers, under actual use conditions."

We have asked a laboratory in Chicago to test our trailer heater in a standard installation in a trailer coach, as we are convinced our specialized product cannot be properly nor adequately tested in their laboratory. We have had former products tested and approved in their laboratory, but felt that the listing was not properly indicative. We are willing and eager to submit our product, already installed in a trailer coach, which we will supply at

"FINISHING COSTS have been cut... QUALITY improved"

That's the experience of manufacturers of wood products who have been successfully hot spraying with . . .

DULAC CLEAR HOT APPLICATION LACQUERS

● You too can save time, materials and labor in finishing your wood products – can get a smoother film and higher gloss, with increased protection...by switching to the new hot spray, higher-solids finish. Be sure to use a lacquer that's *designed* for this method of application – that has *proved* its merits in actual shop practice. To get the *full* advantages of hot spray finishing, specify M & W DULAC Clear Hot Application Lacquers.

Whether you are finishing...

BAR TOPS . . .

GUN STOCKS . . .

BROOM HANDLES . . .

. . . OR GOLF CLUBS

There's a Maas & Waldstein product that fits your needs. Just tell us your problem!

PIONEERS IN PROTECTION

OUR 76th YEAR • M & W CO. 1876

Consult our engineering department for suggestions as to whether and how our hot spray lacquers may be adapted to your finishing problems.

MAAS & WALDSTEIN CO.

MANUFACTURERS OF INDUSTRIAL FINISHES

our expense, with our approved and specified installation. However, the lab. manager has stated that the testing shall be done in their laboratory.

If you know of a reliable and recognized testing laboratory where we may have our product properly tested under conditions that can have real significance to our customers, we shall be most grateful to learn who and where such laboratory may be.—*R. Heater Co.*

In a letter we are naming several testing laboratories, some of which should be willing to make the tests under conditions you specify.—*Editor.*

Peel-Off Coating Stands Bake Oven Heat

In the April, 1952, issue of *Industrial Finishing Magazine*, there appeared an inquiry on page 84, under the title, "Peel-Off Coating That Will Withstand Baking," which outlined a requirement of the B. Machine Works for a strip-off coating which would withstand baking at 350°.

We manufacture a coating known as P&S Blue Strip Coating No. A-8334, which we feel is worthy of evaluation in this requirement. We can make no specific statements as to its suitability in this particular application, since we do not know the surfaces to which it is applied and the time of exposure to 350° F. We can state, however, that this product is being used on aluminum surfaces where it must peel off after a bake of 10 minutes at 300° F. This product will peel after immersion in warm water.

If you care to pass our name on to the inquiring reader, we would be happy to lend any possible assistance.—*Pierce & Stevens.*

This is in reference to the May, 1952, edition, page 88, "Peel Off Coating" letter by B. Machine Works. Please send us the name and address of the manufacturer who makes the coating that seems to have pleased the B. Machine Works.

Our problem is to mask stainless steel, with No. 4 finish, through shearing, forming, welding and two 300°, 15-minute bakes of painting.—*M. S. Products.*

Information supplied.—*Editor.*

"I hear you're looking for a good stripper."

Salt Spray Cabinet

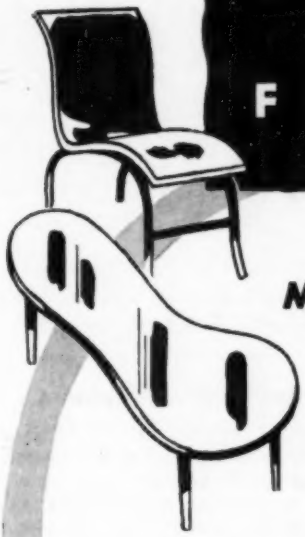
Will you please tell us who manufactures a salt spray cabinet? We would like to get one that would be suitable for testing synthetic baking enamel panels 4x6-in. or 6x12-in.—*J. F. Co.*

In a letter we are naming two concerns, either of which can probably supply what you want.—*Editor.*

Mildew on Bamboo

Under "Questions and Answers," on page 78 of January issue of *Industrial Finishing*, we note the comment on mildew trouble on bamboo. Please fur-

QUALITY LACQUERS and FINISHES



For WOOD and METAL SURFACES

- Hot Lacquers
- Furniture Finishes
- Industrial Lacquers
- Government Specification Coating and Thinners

COAST LACQUERS cost less because we pass along to you the savings made possible by our immediate contact with the huge chemical plants of the Gulf Coast from which we obtain our superior raw materials at low cost. Write for information and prices.

CPL

COAST Paint & Lacquer Co. Inc.

P. O. BOX 1113, HOUSTON 1, TEXAS

nish us with the correct mailing address of the Miami Products & Chemical Co., whose name appears at the end of the article.—*J. L. Shade Co.*

It's 520 Lonoke St., Dayton, Ohio.—*Editor.*

For "Salem Maple"

We would like complete information as to source of stains, procedures, etc., to produce the "Salem Maple" finish mentioned in the April issue on page 94.

Several manufacturers of wood finishing materials can supply you with information and materials. In a letter we are naming some of them.—*Editor.*

W. W. Paint Spray Systems

We are interested in getting the names and addresses of anyone who handles or manufactures water-wash systems for paint spray booths.—G. L. *Co. (Lighting Equipment).*

Practically all of them are represented in the advertising pages of every issue of this magazine . . . but in a letter we are naming them.—*Editor.*

Air Dry Wrinkle? Here!

On page 90, in the May 1952 issue of *Industrial Finishing,* one of your readers has asked for the names of manufacturers of air-drying wrinkle finishes. The Editor has commented that your reference card lists only two firms that offer such a product. We wonder if you will be kind enough to list Pratt & Lambert, Inc., as a manufacturer of air-drying wrinkle finishes?—*P. & L., Inc.*

Yes. Thank you.—*Editor*

"All she needs is a good spray job!"

Paint Sludge Processors

We would appreciate the list of names of concerns who are interested in buying paint sludge from water-wash spray booths. A similar request appears in the "Letters from Readers" section of April, 1952, issue, from Industrial Coating Engineers, to whom you are supplying the information.—*S. (Lighting Division).*

Information supplied.—*Editor.*

Broom Handle Dipping

I have received the May 1952 issue of *Industrial Finishing* and am particularly interested in the article by W. E. Owens of Owens Handle Co., "Broom Handles Gasket Dipped Mechanically". In the last part of his article, Mr. Owens mentions a wax polishing tumbling process for the broom handles.

Our process consists of wax tumbling larger number of small wood

Try this laboratory-tested finishing material . . . the finest protective coating for metal that we've ever seen . . .

Japco

DEVILOX

On steel, aluminum, brass, tin, silver, copper and zinc . . . . DEVILOX (an Epon Resin Finish) has excellent adhesion and flexibility, two characteristics of superior value in metal finishing.

Extensive laboratory tests definitely prove that DEVILOX possesses those desirable qualities that insure satisfactory results in surface coverage, durability and appearance.

In addition to excellent adhesion and flexibiity, DEVILOX shows a high degree of chemical resistance, especially to alkali.

Of prime importance also is the abrasion and mar resistance of DEVILOX, a characteristic most essential to articles subject to hard usage.

Other characteristics contributing to the success of DEVILOX as a metal finish are: good heat resistance; excellent exterior weathering properties. It shows over 1,000 hours salt spray resistance.

Available in baking types only.

For any metal coating job where these characteristics are desirable, DEVILOX Finish is the answer. Write us!

JAMESTOWN PAINT & VARNISH CO.

JAMESTOWN, MERCER CO., PENNSYLVANIA

Industrial Finishes Since 1885

parts, and I would like to contact Mr. Owens in reference to his process. I would appreciate it if I could possibly obtain the address of the Owens Handle Co.—*P. Troy Corp.*

According to the company's letterhead, it's Owens Handle Mfg. Co., 412 Sherman, Conroe, Texas. (Telephone 854-J.)—*Editor.*

Air Control; Rusting Steel

We have noticed in the April issue of *Industrial Finishing* a very interesting article entitled, "Air Control Prevents Rusting of Steel" (see page 95).

As we think the dehumidifier manufactured by the Pittsburgh Lectrodryer Corp. could solve our problem of prestorage of steel sheets, we should be pleased to know the address of this firm.—*A. H. L.*, Trooz, Belgium.

It's 500 32nd St., Pittsburgh 26, Penna.—*Editor.*

Paint Sticks

Can you please give me names and addresses of manufacturers of paint sticks, that is, paint in the form of crayon-like sticks, and used for marking purposes?—*L. B.*

See page 114 of May, 1952, issue and page 120 of Nov., 1951, issue.—*Editor.*

Silk Screen and Flock

We noted with interest, in the January, 1952, issue, an inquiry from one of your readers (page 88) regarding silk screen and flocking equipment. We would like to get names and addresses of concerns who can supply such equipment.

We are consulting chemical engineers, and this information will be most helpful to us.—*L. B.*

Why Enamel Creeps

We wonder whether we may obtain from you about 50 reprints of "Why Enamel Creeps from Corners", as published in April issue, pages 90 and 92. If so, please mail them to us with your bill—or advise us of the cost so that we may send our check to cover.—*R.C.Co.*

Wait until you read the comment on that Question and Answer, as published in this issue. You may want that included too.

However, 50 reprints is too small a number to set up for a press run. Reprints cost money and unless at least 500 or 1000 are ordered the cost per reprint is excessive.—*Editor.*

Steingetz System of Dipping

Can you advise where information may be obtained on the Steingetz System of automatically controlled dipping process?—*E.W.Co.*

Never heard of it but if it exists some of our readers must know about it. Will some reader please tell us what he knows of this?—*Editor.*

Dip Tank Bubbles

We are interested in the article about air bubbles in dip tanks, featuring the use of pump and flow nozzles to institute constant circulation of the dipping material by pumping material from near the bottom of the tank and flowing it out of the top, which appeared in March issue of *Industrial Finishing.*

As we are not in possession of that particular issue, we would appreciate your forwarding us a copy of this issue. —*J. Toy Corp.*

Copy of March sent.—*Editor.*

Enamels • Undercoats

LACQUERS • SEALERS

SHELLAC • FILLERS

STAINS • GLAZES

SPECIALTY FINISHES

• *FOR APPLICATION BY ALL METHODS* •

Fine Enamels and Undercoats made in all types. Air drying or baking. For wood or metal. Spray, dip, roller-coat, screenprint, squeegee or brush application.

Industrial Finishes in Step with the Times

JAMES B. DAY & CO.

CHICAGO 14

for prompt service on all

SPECIFICATION FINISHES

COMPOUNDS
DOPES
ENAMELS
INSULATING FINISHES
LACQUERS
PAINTS
POLISHES
PRIMERS-PAINT
SEALERS
THINNERS
VARNISHES
WAXES

★ Immediate quotations on practically all Federal, Army, Navy and Air Force Specification Finishes.

★ Prompt dependable help with *any* problem involving finishes or their application.

★ Nine strategically-located plants throughout the United States and Canada to provide you with nearby source of finishes custom-tailored to meet your requirements.

Write, wire or phone

THE GLIDDEN COMPANY

Dept. K-652 • 11001 Madison Ave. • Cleveland 2, Ohio

Instruction Manuals

INSTRUCTION or operating manuals—attractively designed and containing clear easy-to-understand information about operating, adjusting and maintaining equipment; using materials and supplies, and with emphasis on safety precautions for the worker—these can be of great value in any manufacturing plant.

Where is there a plant in which the equipment, materials and supplies used, and the operations performed are all so simple and easy that no instructions are needed? All of these things may be simple to those well versed in the work, but in case one or more of them are absent from the plant, the manual provides the know-how for others less experienced. It is also valuable in training new personnel.

Some manufacturers will say their operations involve too many variables, changing conditions, different types of equipment and raw materials, to make possible the compiling of a reasonably reliable manual. Well, the complete manual will include these conditions, types and kinds, and it may be added to as still newer ones develop.

The time spent in preparing an operating manual will be saved many times as the months and years go on. The working personnel will not be asking so many questions or—failing to ask questions or understand oral instructions—making errors that can prove to be costly in damaged equipment, wasted materials or rejected products. [*Continued on page 86*]

Sticky, Gummy Materials *CAN* be pumped!

YOU CAN handle an amazing variety of heavy industrial fluids and semi-solids with Graco Powerflo Pumps! Air operated, they work in any location, pumping out of pails or 400 lb. original drums. Hoses, flow guns, spray guns, nozzles available. Tell us what your heavy material is, and we'll tell you frankly what savings Powerflo can make. We have some interesting case histories. Write now for free Powerflo catalog.

GRAY COMPANY, INC.
62 Graco Square
Minneapolis 13, Minnesota

GRACO
Powerflo pumps

Regional Offices: New York, Philadelphia, Detroit, Chicago, Atlanta, San Francisco

Operating manuals should be produced in loose leaf form and kept in a binder so that revisions can be easily made. As products, materials, methods and equipment are changed, revised pages may be inserted to replace or supplement those already in the book.

Andrew Brown Co. Appoints Dist. Managers; Representatives

Andrew Brown Co. announces the following personnel changes:

A new district manager with headquarters at 3201 N. Broadway, Wichita, Kansas, Mr. H. P. Lehman now offers closer technical liaison to users of Brolite aircraft finishes in the surrounding areas. Mr. Lehman has over 20 years experience in the finishing business, many of them concentrated in aviation finishes. He will be closely associated with the Company's factory in Irving, Texas.

Mr. Stuart Denemark, withhead quarters at 2715 Howey Road, Columbus, Ohio, will serve as district manager to users of Brolite finishes in the surrounding areas. Mr. Denemark, who has had wide experience in both industrial chemicals and finishes, will be closely associated with the Company's Laurel, Maryland plant.

Now representing the Company in the North East States, Mr. James McQuaide will concentrate on the Z-Spar marine finishes. Headquarters will be at 102 Vanderbilt Ave., Manhasset, L. I., N. Y.

Also specializing on marine finishes, Mr. Wm. W. McAllister will be located at 111 Oakley St., Cambridge, Maryland, and Mr. Charles P. Heidel at 230 N. J St., Fort Worth, Fla.

REPRINTS AVAILABLE

"CLEANING AND PREPARING METAL SURFACES FOR THE APPLICATION OF MODERN PAINT COATINGS"

from the November, 1951, Issue.

PRICE 10 CENTS PER COPY— Stamps Accepted.

INDUSTRIAL FINISHING Magazine

1142 N. Meridian, Indianapolis 4, Ind.

W. R. Hebert Represents Coast Paint & Lacquer Co.

Wilbur R. Hebert has joined the Coast Paint & Lacquer Co., of Houston, Texas, as special sales representative for industrial lacquers and synthetic finishes in the Gulf Coast area, according to Kenneth McDowell, the firm's president.

Mr. Hebert often called "Frenchman" by his friends, and widely known for his collection of choice Cajun stories, will make his headquarters in Temple, Texas.

He has been associated with the paint industry for more than 18 years.

H. V. Walker Co. Plant Now Part of Aula Chemicals, Inc.

Aula Chemicals, Inc., manufacturer of textile and allied printing colors, formerly at 131 Dey St., Jersey City, N. J., has taken over the plant of H. V. Walker Co., manufacturer of industrial finishes (lacquers and enamels) and similar products, at 714 Division St., Elizabeth, N. J.

Aula Chemicals, Inc., has taken over the entire production facilities of the Walker plant, adding it to the former Jersey City production equipment of Aula. In addition, quantities of new equipment will be added to complete a plant modernization program now under way. Both the Aula line of textile colors and the Walker line of industrial finishes are now manufactured by Aula. The H. V. Walker Co. will continue to sell the Walker line of industrial finishes.

The acquisition of the Walker site and facilities gives Aula 20 times its former manufacturing, storage, office ond laboratory space, located on 4½ acres of land. Both capacity and personnel are expected to double within six months, according to Dr. Laszlo Auer, president of the company.

George Gorra Joins Chemical Coatings

Chemical Coatings Corp., of Rocky Hill, Conn., announces that George Gorra has joined its technical staff. He will be primarily engaged in development work on flexible coatings for which his long experience in the field of vinyl coatings, film production and vinyl inks provides an excellent background.

Crystal Clear

PERFECTION SYNTHETIC FLAT FINISHES

No distortion . . . no cloudiness . . . and a wonderful WAXED EFFECT with HAND RUBBED APPEARANCE

You'll be amazed at the difference in finished appearance . . . the full beauty of woods and grains . . . the ease, convenience and economy . . . when you use PERFECTION FLAT FINISHES. A grade to suit each budget and drying time. ***Write for samples.***

SEE THE DIFFERENCE
FEEL THE DIFFERENCE

Perfection **PAINT & COLOR COMPANY**

INDIANAPOLIS 2, INDIANA

Practically every

DeBURGH CONVEYOR

pays its cost in 10 months
or LESS from non-productive
labor alone!

SAVES:

Floor Space
Drier Size
Heat (a recurring expense)
and
Creates a Better Product

INVESTIGATE—*No charge for estimates*

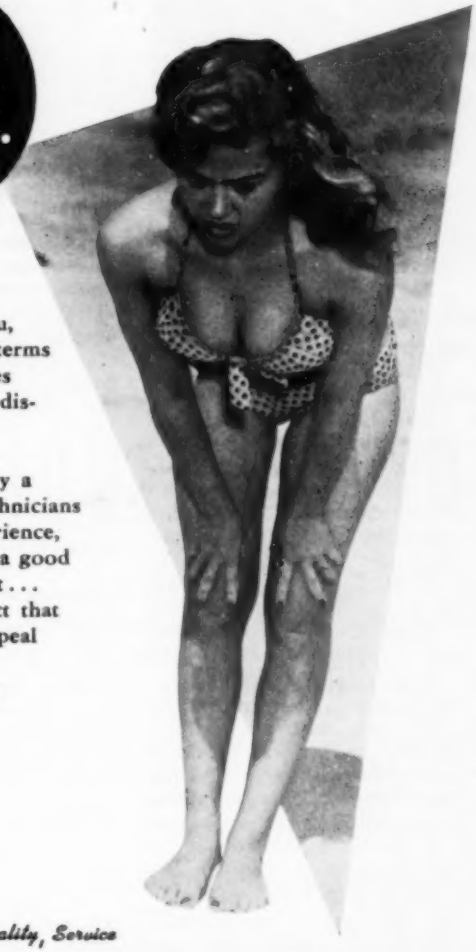
DeBURGH CONVEYORS

Patented and Patents Pending

For Assembly, Finishing and Upholstery

1741 K St., N. W., Washington 6, D. C.

S.A.



Sorry if we misled you, but we are thinking in terms of *Sales Appeal* . . . Sales Appeal such as only a distinctive, eye-catching finish can produce. Here in our laboratory a staff of experienced technicians have the training, experience, and facilities to create a good finish for your product . . . a finish that will inject that all-important Sales Appeal plus the protective qualities a good finish must have. Write for further information.

Research, Quality, Service

ROCKFORD VARNISH *Company*
ROCKFORD, ILLINOIS
Manufacturers of Protective and Decorative Coatings

Affiliate
GORDON BARTELS CO.
Roller Coating Specialists

Enamel "Creep" is Really "Solvent Wash"

Regarding Questions and Answers entitled, "Why Enamel Creeps from Corners," as published on pages 90 and 92 of April, 1952, issue of this magazine, I want to take exception to the statements made by Mr. George Conrad and the Editor that the "creeps" are always attributable to cleaning failure. I have run into this difficulty on at least four occasions, and on two of these instances a very good job of metal cleaning was being performed.

One setup was a 2-stage Oakite "Cryscote" system, with a gas fired dry-off oven and another was a 3-stage Bonderite system with an infra-red dry-off oven. The two other systems were both permador vapor wash systems. As most of my work was done on the first two systems, they are the only ones about which I will write.

Some of the various experiments tried on the two first mentioned systems were as follows:

After the mechanical metal cleaning operation, a very thorough cleaning operation was performed, using naphtha, lacquer thinner and Neilson's Metal Prep, each performed in a workmanlike manner. The results showed no improvement. Next, we cleaned some cabinets in the same manner and allowed them to air dry overnight, thinking that perhaps our cleaning solutions were being trapped around the edges and they themselves were the source of our trouble. These cabinets, sprayed approximately 16 hours after washing, showed no improvement whatsoever.

We were now convinced that the metal cleaning was definitely not the source of our troubles and started looking elsewhere. By trial and error it was found that *an over-amount of material showed a much more pronounced "creep" than did a light or normal coat.* The next step was a training program with the sprayers and also a check of fluid and air pressures. With a little coaching the sprayers applied a much more even film and still stayed within the allowed film thickness specified. This showed a definite improvement, but by no means could the condition be called corrected.

The next step was a change in solvents, ending up with a very fast aromatic, compared to Solveso No. 1. This was an added improvement, but the condition was not completely corrected. At about this stage we renamed the "creep"; *from then it was called "vapor wash."*

When we started on this experiment, every shelf in each cabinet had to be resprayed with a matching air-dry material on each edge and back. This operation was performed just ahead of inspection; the results were far from satisfactory, as it showed the dry spray edges around the entire outer edge of each shelf.

At the stage of the solvent change we had shown an improvement to the extent that an average of only one edge on one shelf per cabinet needed the air-dry touchup.

The next move was to preheat the cabinets with a short bank of infra-red lamps, just ahead of the exterior spray. This took quite a lot of temperature reading until distance and time in regards to the infra-red lamps was estab-

WITH

LIQUID ENVELOPE

PEELABLE PROTECTIVE PLASTIC FILM

Keep your booths firesafe this labor-saving way:

1. **Scrape down and spray on "LIQUID ENVELOPE" with your regular spray-equipment.**
2. **When overspray accumulates, break "LIQUID ENVELOPE" skin and peel off in great, big pieces. Re-spray.**

That's all there is to it! You save labor . . . promote fire safety . . . get better illumination. Costs less than outmoded hand-scraping or grease-papering. Order 5 gallon Test-Sample at the Drum Lot price. Hundreds of smart operators have!

BETTER FINISHES & COATINGS, INC.

268 Doremus Ave., Newark 5, N. J. • 122 E. 7th St., Los Angeles 14, Calif.

DISTRIBUTED BY

Aviation Lubricants Co., San Diego, Calif.
General Spray Equipment Co., Boston, Mass.
Bay State Spray Equipment Co., Springfield, Mass.
Lea Manufacturing Co., Waterbury, Conn.
Edgcomb Steel of New England, Milford, Conn.
Kellermann Paint Co., New York, N.Y.
Grapek Paint Co., Newark, N.J.
H. J. Gettemuller Co., Inc., Baltimore, Md.
R. W. Renton Co., Cleveland, Ohio, Indianapolis, Ind.
Supplee-Biddle-Steltz Company, Philadelphia, Pa.
Dean & Barry Co., Columbus, Ohio
Vic Miner Co., Toledo, Ohio
Abrasive & Supply Co., Detroit, Mich.
Nelson Industrial Supply Corp., Grand Rapids, Mich.
O'Donohue Sales Co., Milwaukee, Wis.
Paints & Lacquers, Inc., Chicago, Ill.
Tanner & Co., Indianapolis, Ind.
Metal Goods Corp., St. Louis & North Kansas City, Mo., Dallas & Houston, Texas, Denver, Colo., New Orleans, La., Tulsa, Okla.
Hubbard & Stau, Los Angeles, Calif.
The Plastic Paper Co., Los Angeles, Calif.
C & H Supply Co., Seattle, Wash.
Hugh Russel & Sons, Ltd., Montreal & Toronto, Canada

lished. This was necessary to get the proper metal temperature to force the solvent out very fast, but still be able to get a wet coat on the interior.

As soon as the infra-red arrangement had been completed and put into operation the vapor wash had disappeared entirely.

The only time the vapor wash appeared again was directly attributable to either an over amount of enamel or an error in solvents.

I might add that atmospheric conditions, viscosity, air pressures, seemed to have no noticeable effect on the vapor wash. In regard to viscosities, the entire range was tried. In running some tests in our lab. it was found that most of the vapor wash conditions could be duplicated with the spraying of the inside of a one-gallon uncoated pail.

The two manufacturing concerns where the bulk of these experiments were run were more than ordinarily kind in allowing all of this to go on while running production — and this was very much appreciated.

I hope I have made clear the reason I have taken exception to the statements by Mr. Conrad and the Editor.— *F. L. McCleary.*

More About "Polystyrene Plastic" Article

I have read with interest the comments made by Mr. Ostock in the April issue (page 92), pertaining to my article on polystyrene finishing, as published in the February, 1952, issue of "Industrial Finishing" (pages 51, 52, 54 and 56).

In my article, a general survey was made of the factors involved in finishing polystyrene, factors which should be understood by those using the plastic in order to minimize the possibility of difficulties that might otherwise occur.

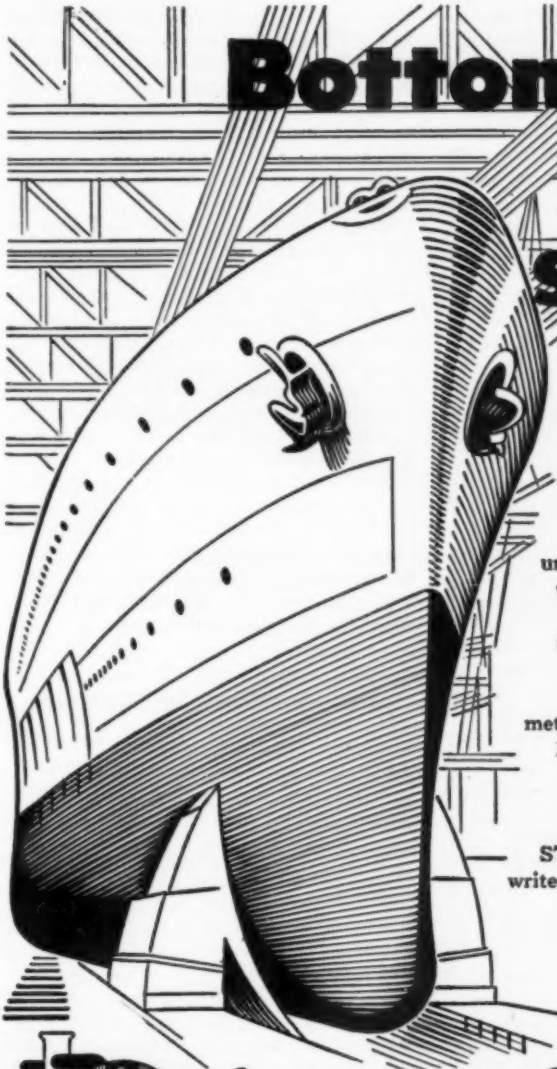
It is true, as stated by Mr. Ostock, that finishes for polystyrene can be made not utilizing the solvents in the formulation for adhesion. But this is only one type of coating possible. Many other finishes for polystyrene (both "lacquer" and "synthetic" types) depend on part of the solvents used in the formulation, as well as the resins in the film, for the best possible adhesion. In these cases a disruption of the solvent balance may cause either crazing or inferior adhesion, and therefore this balance should be restored by the addition of the proper solvent blend furnished by the manufacturer.

I also mentioned that these finishes can be applied by most of the conventional methods, namely, spraying, brushing, silk screen, dipping, etc., on most commercial grades of polystyrene; but if in certain instances crazing does occur, the use of a small amount of a special solvent blend designated by the manufacturer will eliminate this difficulty. This does not imply that users of polystyrene finishes will get into difficulty; but if on occasions trouble does arise, it can be easily and quickly corrected.

It is quite possible to formulate polystyrene finishes as well as other types of finishes that will be "practically" blush-proof. But in order in accomplish this a more costly solvent mixture is generally used. The incorporation of these solvents needed for blush resistance will have a tendency to slow down the drying of the finish when blushing is no particular problem. Therefore, from the economics of the situation as well as speed of drying, it is better, in my opinion, to add the retarder to the finish as needed.

The application of polystyrene finishes does not involve any particular difficulty. As in finishing metal, wood, paper, cloth, etc., a certain amount of routine care must be exercised in order to insure good work. The hose line must be clean, the material must be at the right consistency; spray guns,

Bottoms up! for Stantite



STANTITE Spraying Primer has passed the tough test of a ship's bottom with colors flying. That's why many ship owners are undercoating with **STANTITE** to minimize corrosion and rust creep. And on land, wherever metal is coated, rust-inhibiting **STANTITE** also provides excellent adhesion to any metal surface, with most top coats. Ideal under air-dried or baked finishes, it dries rapidly . . . is unimpaired by any baking schedule. Find out *now* what **STANTITE** can do for you . . . write today: Stanley Chemical Co., 41 Berlin St., East Berlin, Conn.

STANLEY

Industrial Coatings

STANLEY CHEMICAL

LACQUERS SYNTHETICS JAPANS ENAMELS

brushes, and silk screens must be operating properly; all of this must be done in order to produce the right kind of finish on any surface.

Finally, I sincerely regret that Mr. Ostock read into my article the implication that the problems of finishing polystyrene had not been overcome. The large volume of polystyrene finishes used today testifies to the fact that, although the finishing of polystyrene may involve certain problems due to the nature of the plastic, these problems have been successfully overcome, and the occasional difficulties that may arise can be easily and quickly corrected. — *Edward Berberian, Technical Director, New England Mfg. Division, United Lacquer Mfg. Corp.*

Golf Club Finish

We have noted, with considerable interest, an inquiry by an unnamed firm, for an adequate finish to be applied to a wooden golf club head. This inquiry was listed in the April, 1952, issue of *Industrial Finishing* on page 88. Being a producer of similar items, we too are interested in such a finish and would appreciate hearing from any suppliers who may contact you regarding this inquiry. [*Name on request.*]

We feel that we can supply this reader with information regarding suitable finishes that we have compiled over many years of close work with some leading manufacturers of golf clubs.

It appears to us, at this time, that while lacquers are generally being used, the trend seems to be toward synthetic finishes that can be force dried or, in some cases, even baked.

It appears that the trend is prompted oy problems arising not with the application and use of lacquers, but rather with the aging characteristics of lacquered heads. The maintenance of golf clubs is generally handled by caddie boys or other country club personnel and perhaps one of the most rigid tests to which golf clubs are put, unwittingly, is in having them soak in a pail of water for as long as 36 or 48 hours in order to remove the accumulated earth and grass.

It has been observed under careful examination of golf clubs, in water, where good grades of golf club lacquers have been used, that a series of microscopic checks or film fractures appear. This condition is generally attributed to the type of coating used on persimmon wood heads. After careful study, research and development, equally good finishes have been formulated where synthetic coatings are used and thereby the problem of water immersion checking has been eliminated.

We wish to point out, however, that we are supplying both lacquers and synthetics, but we merely wanted to take this opportunity to point out one of the most recent developments that we have worked on, using synthetic finishes.—*Maas & Waldstein Co.*

Refinish Trouble; Silicone

This is in reply to your letter of April 14 and the difficulties one of your readers is having in refinishing operations. [See also the Q. and A. on pages 100 and 102 of May issue.]

It does sound very much as if their troubles are caused by silicone-containing polishes. There are two methods we know which have frequently proved successful in overcoming the cratering and poor adhesion M. A. F. reports.

One is to incorporate a small amount of silicone fluid in the top coat. It seems that lacquers containing small amounts of silicone fluids will work smoothly and adhere satisfactorily to silicone-contaminated surfaces. Since this procedure is such a simple one, it is possible that M. A. F. would care to try this first.

Another method, which we have

Unichrome CLEAR Enamels

add durability to a BRIGHT finish like this

This piece of brilliant door hardware was zinc plated and then made bright as chromium by treatment in Unichrome Dip. This was followed up by application of a really tough, clear enamel—Unichrome Coating B-115—to provide outstanding resistance to corrosion, handling and exposure.

This same, service-proved, non-yellowing baking synthetic is also ideal for use on chromium which has been deposited over thin nickel or no nickel at all. Here, too, you'll get the extra protection and adhesion needed for a dependable, durably bright finish.

Also available are durable, *light-fast* Unichrome Coatings to simulate gold, brass or copper colors on polished stainless steels and chromium.

Need help on a combination finish for your product? Write the Company that knows *metal* finishes as well as their requirements in *coatings*—United Chromium.

UNICHROME

COATINGS for METALS

METALLIC • ORGANIC • PROTECTIVE • DECORATIVE

Products of UNITED CHROMIUM, INCORPORATED, 100 E. 42nd St., New York 17, N. Y.

Waterbury 20, Conn. • Detroit 20, Mich. • Chicago 4, Ill. • Los Angeles 13, Cal.

In Canada: United Chromium Limited, Toronto, Ont.

found effective, is to use a specially designed sealer to seal in silicone contamination. This sealer is then recoated with the conventional lacquers.

We shall be pleased to send M. A. F. samples of either or both of the above types upon request. — *Midland Industrial Finishes Co.*

To Finish Masonite

Could you tell me the best methods and materials to use for coating Masonite? The product has to stand a continuous temperature of about 180° F., some steam and a small amount of acid vapor.—*B.G.*

First, close work with a finishes manufacturer is necessary. The system used will vary according to the type of Masonite, color desired, drying equipment, allowable cost of coating, etc.

One recommended baking system consists of a high quality primer and topcoat. The primer is made of special synthetic resins carefully pigmented especially for imparting adhesion to smooth Masonite hardboard. The topcoat consists of a tailor-made alkyd-amine resin system, suitably pigmented according to the color desired.

REPRINTS AVAILABLE

"WHY COLOR CHANGES IN FINISHED FURNITURE"

from the September, 1951, issue.

PRICE 10 CENTS PER COPY— Stamps Accepted.

INDUSTRIAL FINISHING Magazine

1142 N. Meridian, Indianapolis 4, Ind.

The primer should be sprayed, baked 30 minutes at 300° F., then lightly sanded to remove surface "fuzz". The enamel topcoat is then sprayed and baked for 30 minutes at 300° F. The resultant finish will withstand steam, mild acid and alkali, and abrasion.—*E.V. Goldstein, Chemist.*

The secret to success of finishing of Masonite board lies in the use of the proper type of sealer-surfacer. This material must combine good adhesion with good hold-out over the relatively porous substrate, as well as provide good hold-out for the top coat lacquers or enamels, whichever the case may be. We have successfully solved that problem.—*X.*

P. P. G. Co.'s New Brush Plant

Pittsburgh Plate Glass Co., one of the world's largest users of power driven brushes, has opened a new plant in Baltimore for the manufacture of industrial brushes that will provide additionol research, development, and production facilities for the company's expanding power driven brush operations.

The modern one story structure, fronting at 3201 Frederick Ave., will provide an additional manufacturing space of about 21,000-sq. ft. for the company's Brush Division.

Major users of power driven brushes include the sheet metal, glass, rubber and automotive industries, as well as numerous machinery manufacturers.

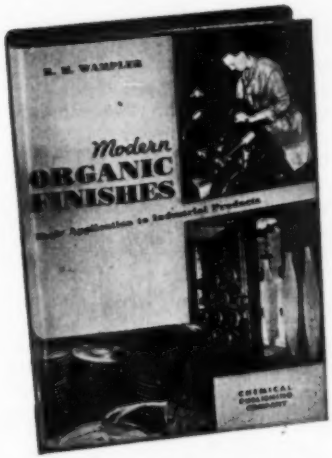
In addition to its Baltimore plants, Pittsburgh Plate Glass Company's Brush Division also operates plants at Keene, N. H. and San Francisco, California.

DuPont Representative in Birmingham

The DuPont Company's Finishes Division announces the appointment of V. H. Meatheringham as industrial sales representative in Alabama, northwest Florida, Mississippi and eastern Louisiana. He will make his headquaters in Birmingham, where his services will be available to the industries in the above territory.

Mr. Meatheringham has been with the company's industrial finishes division for 24 years. He has dealt with practically every type of finishing problem and is well equipped to help the users of industrial finishes in his assigned area.

A "MUST" For All Finishers!



MODERN ORGANIC FINISHES

"Their application to Industrial Products"

This book contains 452 pages of the latest information on finishing. It describes modern finishing materials and equipment for their application, drying, conveying, etc., so that the reader may have an overall picture of modern industrial applications. Throughout, the main emphasis is on proper selection and use of materials to get the best possible finish at minimum cost.

It's Complete — Note the Contents

MATERIALS: Oleoresinous and Alkyd Varnishes and Enamels; Cellulose Lacquers; Spirit Varnishes, High Integrity and Specialty Finishes; Stains, Wood and Metal Fillers, and Miscellaneous Finishing Materials.

MODERN APPLICATION METHODS:

Spray Painting; Dipping and Flocoating; Roller and Knife Coating; Tumble and Centrifugal Finishing; Special Processes.

DRYING METHODS:

The Drying Process—Air Drying; Force Drying; Baking by Convection and Radiant Heat; High-Frequency Baking.

PRODUCT HANDLING IN THE FINISHING DEPARTMENT:

Conveying Methods.

FINISHING PROCESSES:

Wooden Furniture and Cabinet Finishing; Prefinishing Wood, Plywood and Hardboard Structural Materials; Special Industrial Wood Finishing Problems; Finishing Paper, Cardboard and Fabrics, Finishing Plastics and Resin-Impregnated Wood; Cleaning and Surface-Treating Metals; Finishing Automotive and Railway Equipment; Finishing Sheet Steel Products; Finishing Iron Castings; Finishing Aircraft; Rubbing and Polishing Organic Finishes.

SOME GENERAL CONSIDERATIONS:

Good Practice in the Finishing Department; Testing and Evaluating Finishes.

The price is $8.50 and to eliminate bookkeeping we ask that cash accompany order. Sold on a money-back guarantee. Money refunded promptly and without any questions if you are not satisfied.

INDUSTRIAL FINISHING Magazine

1142 North Meridian Street **Indianapolis 4, Ind.**

Portable Spray Gun Supply Pump

A new portable Paintmaster spray gun supply pump that works directly from 5 or 10 gallon original containers has been developed.

The air operated, double action, reciprocating pump is designed for easy handling of paints and materials by plant maintenance departments. The supply pump can be used as a portable sprayer with the Sta-Level hand truck, and can be handled easily by one man.

The separate air-operated, dual-bladed agitator keeps the material perfectly mixed, independently of paint pump operation. The blades (of non-sparking aluminum) are adjustable to any depth. Since no air pressure is exerted on the material, aeration is reduced to a minimum.

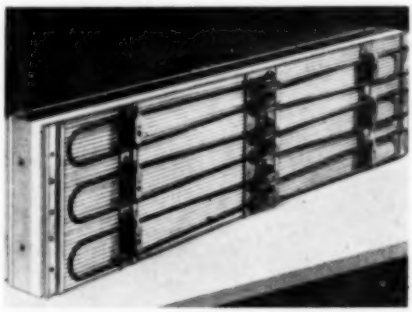
The design and construction of the pump are such that it can handle many abrasive type materials; it is adapted for spraying most of the newer vinyl and plastic base coatings. A 10-gallon liner container is provided for special mixing conditions.

For additional information about the Graco Portable Heavy Duty Paintmaster, write Gray Co., Inc., 1012 Sibley St., Minneapolis 13, Minn.

Move it to the present spray painting job.

Electric Infrared Oven Panels With All-Metal Heating Element

New, pre-engineered electric infrared oven panels are announced by Edwin L. Wiegand Co., manufacturer of Chromalox electric heating equipment. The panels, in two modular sizes with built-in bus bars, insulation and frame, arrive on the job complete, ready to be erected in oven structures and connected to plant wiring. Simplicity of



Single radiant panel showing electric tubular elements, reflective sheeting, ventilation slots, and other built-in features.

BARRETT "FILWHIRL" ENAMELERS make easy work of many difficult coating problems

The Barrett Centrifugal Enameler

The Barrett "Filwhirl" Centrifugal Enameler provides a sure, clean and economical method of applying enamel or lacquer to parts or products that can be rotated. It saves coating material, time and expense. It is designed for bulk handling, and speedy production requirements.

It has proven highly successful in coating helical springs, clips, clasps, zipper parts, bead and link chain, toys, automobile and luggage hardware, misc. metal stampings, castings, etc. Good results are obtained with japan, lacquers, varnishes, paints, waxes. No drips or fatty edges.

Furnished in spindle post, fixed bowl, and carrier types, in several capacities. Safety features included and auxiliary equipment is available.

Send a few representative samples to be processed and submitted for your examination.

THE LEON J. BARRETT COMPANY
Designers and Builders of Centrifugal Machinery
1703 GRAFTON ROAD WORCESTER 1, MASS.

DRUM CHAINER

A compact and efficient machine for cleaning drum interiors.

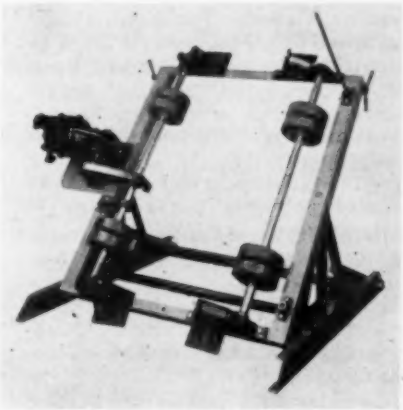
Frame tips manually either way for end cleaning.

Locks in horizontal position for side cleaning.

Rolls 55-gallon drum at 30 R.P.M. with ¼ H.P. motor.

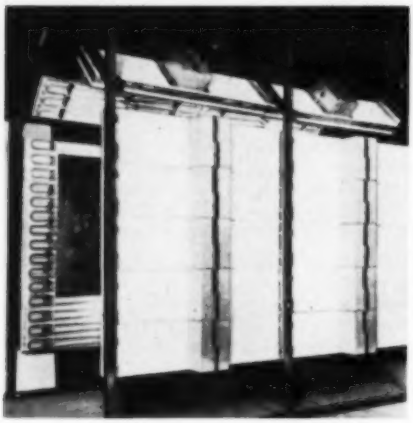
Also made for 30 and 55-gallon drums, as well as for 55 and 110-gallon drums.

Write for literature and prices.



Unit illustrated above for 55 and 110-gallon drums with ½ H.P. motor.

THE VOL-U-METER CO., P.O. Box 54, Buffalo 16, N. Y.



Oven assembly photographed before any electrical connections are made. Assembly consists of 24 radiant panels (10.8-kw each), total load 259.2-kw. Panels are mounted on pre-cut steel framing obtained from stock.

the panels meets the need for ovens that can be built quickly, easily and economically.

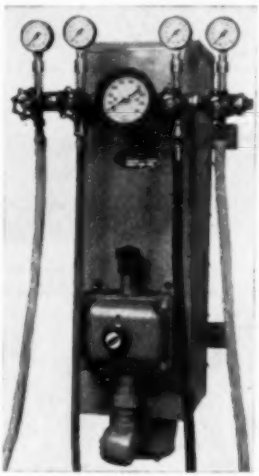
Energy radiated by this far-infrared generator is absorbed with practically equal speed by all colors from black to white, with negligible reflection. Even clear glass and plastics, which transmit near-infrared, absorb this far-infrared radiation. *Far-infrared is a technical name for the longer wave length of radiation, which is far from the visible portion of the spectrum.*

This absorption-efficiency results in rapid heating, bringing work to temperature quickly. . . . The intense radiation can be dialed from 4% to 100% of capacity for accurately selecting and maintaining work temperatures up to 700° F.

Chromalox field engineering service is available for on-the-spot assistance to help in working out radiant oven requirements. For more information write Edwin L. Wiegand Co., 7559 Thomas Blvd., Pittsburgh 8, Penna. Ask for Bulletin CS-605.

Heats Compressed Air to Spray Finishes Hot

On the principle of heating the compressed air that is used for atomizing and spraying lacquers and enamels—heating the atomizing air to heat and thin the finishing material—The Capitol Machine Co., 36 Balmforth Ave., Danbury, Conn., has developed the Camaco Electric Air-Heater. In other words the finishing material is not heated until it is atomized by hot air supplied to the spray gun.



Heats compressed air used in spray gun.

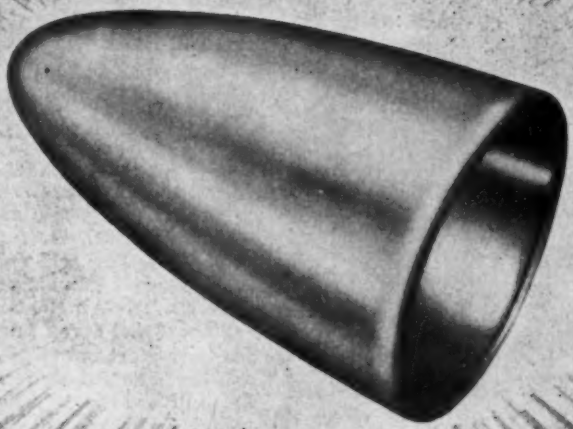
According to the manufacturer's literature:

Four spray guns can be operated from one Electric-Air Heater.

When ready to start, the operator turns on the control switch, warms up the compressed air for ten minutes and starts spraying. When he stops spraying for a short time, he turns off the material and lets the air continue, which will keep his spray gun warm and ready to start immediately.

When changing materials or colors, he turns off one color and turns on the

. . unharmed by 250 hours of Salt Spray



Here is laboratory proof that dramatizes the stubborn protection given by a Randolph Finish.

This aluminum lighting fixture part—with one coating of Randolph Clear Baking S. G. Enamel Y-7300—was bombarded for 250 continuous hours in the Salt Spray (Fog) Chamber of a nationally-known testing company. Exposed to these severe moisture conditions, the part emerged without a flaw on its perfect surface.

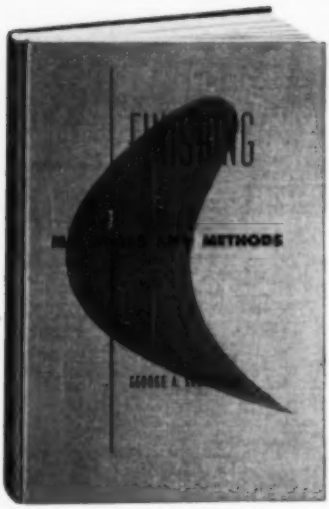
Here is product-protection that never yields under the severest test! And that's not the whole story of Randolph quality. Randolph Finishes make your product look better, serve better and wear better—at lower costs!

We'll be glad to send you a free sample of Clear-Baking S. G. Finish Y-7300 if you write us. Any time you have finishing difficulties, call on our able technicians for help. They specialize in solving finishing problems.

DOPES · LACQUERS · ENAMELS · THINNERS

RANDOLPH PRODUCTS CO.

CARLSTADT, N. J.



THIS NEW book contains practical and up-to-date information on modern finishing materials, equipment, accessories, supplies, and methods. It has 320 pages, 6x9-in., divided into 31 chapters. Large legible type on high quality white paper, with generous margins and numerous illustrations, make the book easy and inviting to read. Subjects can be easily found either in the table of contents at the front of the book or in the 12 pages of alphabetically indexed subjects at the back.

Chapters I to XXI inclusive deal with materials—paints, varnishes, bleaches, lacquers, enamels, shellac, stain, filler; wrinkle and hammer effect finishes; pearl essence, waxes, flock, masking tape, etc.

The remainder of the book (Section II) contains chapters on finishing methods—spraying, flow coating, roller coating, tumbling, methods of drying, etc. Many references at the ends of chapters give credit for information supplied in articles previously published in Industrial Finishing Magazine.

The book is substantially bound between heavy stiff covers, colored in two tones of light orange and lettered in black. Author of the book is George A. Soderberg, Assistant Professor of Industrial Education, The Stout Institute in Wisconsin.

Price $4.00—Money Back Guarantee

INDUSTRIAL FINISHING

1142 N. Meridian St. Indianapolis 4, Ind.

next, or disconnects one hose and connects the next hose to his spray gun. He is using room temperature paint materials in the material hose.

Air temperature is closely regulated by a specially designed control and heating circuit.

Air pressure is individually controlled for each spray gun. No hot air passes through the pressure regulator. When necessary, two or more regulators can be used. . . .

No change in cold spray equipment is necessary. You simply add the Camaco Electric-Air Heater between your regulator and spray guns and you are ready to start spraying hot materials. When you do not need hot air, you simply pull out the switch supplying the heater and you will spray conventionally.

The manufacturer claims that spraying finishing material with heated air saves up to 30% of the material; gives much more brilliance to the coating and is a positive cure for "orange peel"; spray guns keep their adjustment longer. There are no defective pieces due to spots caused by water or oil coming through your guns as a liquid. The Camaco Electric-Air Heater converts any moisture, oil or water in air supply to a vapor which blends with the air, creating a perfectly neutral atomizing air supply at all times.

The standard equipment is a self-contained explosion-proof unit with temperature control in the assembly.

Steam Cleaning Compound

A new type of steam cleaning compound is available which will greatly improve the cleaning operation wherever steam or vapor cleaning is used.

Magnus 72 contains no alkaline salts. This feature removes a serious hazard when used for cleaning any equipment where electrical circuits are involved; no short-circuiting troubles. This new compound is non-conducting.

SPEEDY
SUPER OIL
BEST KLEEN
SEND US YOUR MARKING PROBLEMS!
You can save production time and marking costs by using the Glidden Screen Process system for identification on an endless number of products. Send us your problems. We'll answer them promptly without obligation.
THE GLIDDEN COMPANY
Graphic Arts and Sign Finishes Division
11001 Madison Ave., Cleveland 2, Ohio
Airways

It is neutral in reaction, and will not dull or streak any good paint. Painted surfaces cleaned remain bright and glossy. It is non-corrosive for the same reason. Aluminum and other soft metals, which are attacked by alkaline salts, are not affected. It is safe for operators, with no hazards of skin contact. The compound may be used indoors, as it generates no objectionable fumes. Further information may be obtained from the Magnus Chemical Co., Garwood, N. J.

Barrett's New Lacquer Has High Cold Check Resistance

The Barrett Varnish Co., 1532 S. 50th Court, Cicero 50, Ill., has announced a new line of lacquers and lacquer sealers that have exceptionally high cold check resistance.

The new Durflex Lacquer and Durflex Lacquer Sealer have been tested through 25 cycles over a temperature range from —6° F. to 110° F. without showing signs of checking, according to a company spokesman who points out that the new finish was developed as an answer to the problem of long storage periods in wide temperature extremes.

Durflex Lacquer is available in sheens from dead flat to high gloss, and in a wide range of solids. In addition to its high cold check resistance, Durflex Lacquer offers fast drying and easy working, the manufacturer states. The lacquer coating dries to handle in two hours and can be rubbed after an overnight drying. The companion Sealer powders quickly and will not gum the sandpaper.

The manufacturer invites inquiries from finishers who desire more detailed information about these materials.

A New Electrostatic Method of Spray Painting

A new, scientifically engineered, electrostatic paint spray process, known as the Staticote System, has been announced by Staticote Systems, Inc., of Chicago, Ill.

Staticote Systems is a newly organized corporation, headed by Mr. E. C. Turngren, Mr. John Gilbert, and Mr. George W. Lau, who have for years been engaged in perfecting their unique paint spraying system. The new method, designed for the painting of various metals, claims a great savings in both labor and materials and assures a more uniform over-all coat, without runs or dripping.

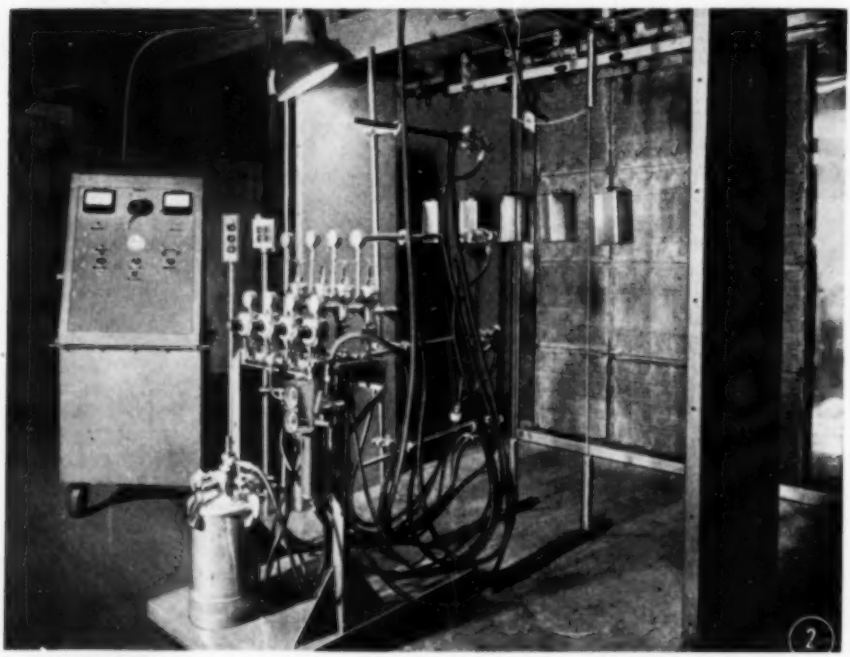
The Staticote System is installed under the supervision of the Staticote Engineers. A carefully engineered system of operation is worked out for each individual user, thus assuring him the most advantageous method and the utmost economy in the use of the Staticote System. A full year's guarantee against mechanical defects is given with each installation.

For complete information and illustrative literature, write Staticote Systems, Inc., 13783 S. Leyden Ave., Chicago 27, Ill.

New Rubbing Liquid Has Desirable Characteristics

The Old-North Mfg. Co., of Lenoir, N. C., one of the few firms specializing in rub-room materials, announces a new rubbing liquid called "Skotch-Rub."

"Skotch-Rub" is reported to be so



Typical Staticote System installed in front of overhead conveyor line and paint spray booth.

Die-cut to your exact specifications. Increases efficiency! Speeds-up production! *Expedites Defense Orders!*

PHONE or WRITE FOR PRICES and SAMPLES.

PANOCO Dept. I
505 Carroll St., Brooklyn 15, N.Y.

ideal as a rubbing liquid that accounts cooperating with the manufacturer in its development, have hailed the liquid as the most important advance in rubroom procedure since the introduction of air-driven equipment.

It is claimed that high quality rubbing results are easily obtained with a time saving of 33⅓%. No trace of residual slush or after-bloom remain when this rubbing lubricant is properly used.

Another important characteristic of this new rubbing liquid is its affinity for finished surfaces, which reduces the liquid loss by machine action. This characteristic alone is of particular interest to practical finishers who have seen as much as 45% of their rubbing oils knocked to the floor when first contacted by mechanical rubbing equipment.

The manufacturer will supply samples on letterhead requests.

Spra-King Barrel Pump

The Versatal Spra-King barrel pump fits into the head of a regular shipping drum of paint or finishing material, as shown in the picture, and provides a safe convenient means of transferring materials directly to spray guns.

According to the manufacturer, Stewart - Warner Corp., 1826 Diversey Parkway, Chicago 14, Illinois, the Model 7826 is excellent for use with paint circulating systems, insuring control of material at all times. It can be located in a fireproof paint room for greater safety and will pump to several sprayers many hundred feet away.

The manufacturer declares further that it saves time at seven points by eliminating all of these steps:

1) Installing bung valve.
2) Barrel racking.
3) Filling small containers.
4) Delivery to jobs.
5) Uncapping pressure pots.
6) Straining and filling.
7) Recapping pressure pots.

Coating For Polystyrene Resists High Humidity

Development of Styrophane, a new organic coating for polystyrene designed to withstand high humidity, is announced. The new finish is expected to find its most significant use as a decorative coating for refrigerators with interior color trim and household appliances.

Styrophane may be applied by spray to injection molded polystyrene parts. It has excellent wetting characteristics, good flow or leveling out, and when properly applied does not craze the plastic. It is an easy material for the spray man to handle.

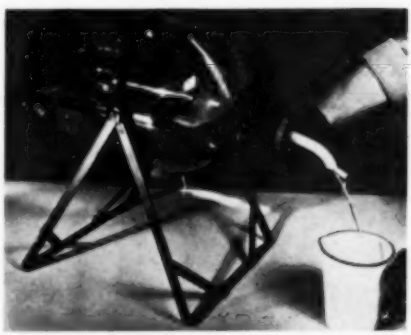
A technical bulletin describes its many unique properties. Results of tests show that the finish resists chipping, cracking and abrasion; it is resistant to household soaps and detergents, as well as fats, oils and grease. The film, when thoroughly dry, is odorless, tasteless and non-toxic. It is available in a clear coating, a bronzing vehicle, in pastel tints and in beautiful metallic colors.

For further information write Standard-Toch Chemicals, Inc., at either 2600 Richmond Terrace, Staten Island 3, N. Y., or 2600 Federal St., Chicago 16, Ill.

Safe Pouring Spout And Bottle Tilter

The GS pouring spout and tilter provides a safe and easy method of pouring liquids into smaller containers. It is designed to prevent accidents and to save materials caused by spilling, splashing and carelessness in pouring liquids.

A chain is provided to hold the bottle in position when tilted. The cradle is made of steel. The safety air vent



Pours acids smoothly and safely.

Buy "Know-How"

The experience of Watson-Standard Laboratories well serves the Metal Coatings Industry and is widely recognized.

The development and marketing of these outstanding and successful coatings are represented by our systems for Crown Finishing, Closure Finishing, Can Decorating, Exterior Signs, Metal Awnings, High Heat Finishes for Heaters, Extreme Chemical-Resistant Finishes, Anti-Corrosive Finishes . . . these are some of our typical accomplishments. Epoxy, Vinyl, Alkyd, Acrylic, Phenolic and Oleoresinous types . . . these newest tools available to the Coatings Industry are embodied in these specialized finishes.

Watson-Standard Finishes are not standard formulations, but are prescription compounds to fulfill the needs of each individual application. The services of our laboratory and field technicians are available to you without obligation. Let us help you with your metal coating problem.

Watson-Standard CO.

225 GALVESTON AVE., PITTSBURGH 30, PA.

NEW YORK OFFICE: 15 Park Row, New York 38, N. Y. • CHICAGO OFFICE: 55 E. Washington St., Chicago 2, Ill.

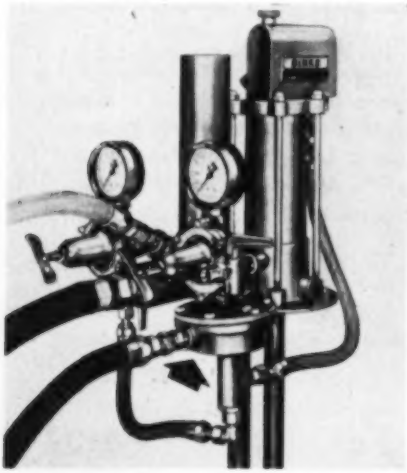
INDUSTRIAL FINISHES · PAINTS · PLASTICS · CHEMICALS

pouring spout fits any size bottle and assures a smooth even flow without spurts or splashes.

For complete information write General Scientific Equipment Co., 2700 W. Huntingdon St., Philadelphia 32, Penna.

Surge Control for Pump and Spray Gun

With a new control known as the Binks Surge Control, it is now possible to apply materials evenly with a Binks air-operated material handling pump. Formerly, when an operator shut off the spray gun, the pump continued to operate and a pressure higher than normal built up in the pump and hose. Then when he triggered the gun, material shot from it violently in spurts and globs. This resulted in wasted material and an uneven coating over the surface being sprayed.



View of Binks material handling pump with new surge control (see arrow). This control eliminates violent "spurts" of material when the operator triggers the spray gun that is connected to the pump. The control is now available as standard equipment on new Binks pumps and can be fitted easily to Binks pumps already in use.

The new control overcomes this problem by automatically shutting off the pump's supply of compressed air the instant the spray gun is closed. It starts the pump operating again the instant the spray gun is opened.

The surge control is said to have many advantages; for example, it makes possible the use of a material handling pump for the smooth application of all types of materials, the elimination of high pressure build-up extends the life of the pumping mechanism and the material hose, and it overcomes the problem of large air pressure drop, because less pressure is needed to operate the control.

For full information write Binks Mfg. Co., 3112 Carroll Ave., Chicago 12, Ill.

New Meter Indicates Surface Roughness

A portable electronic Surface Comparator, to determine surface roughness at the point of production, has been developed.

The instrument has a roughness range of 1 to 100 microinches RMS. It evaluates the quality of a surface finish, and the index in microinches RMS is indicated on a meter with the needle at an arrested position. No visual or mental averaging is required. This device is applicable for any finished surface, flat or curved.

Detailed information is available from Kota-Meters, Inc., 2311 Burbank St., Dallas 19, Texas.

New Interior Varnish by Du Pont

A new, clear interior varnish with improved wear resistance and beauty of finish has just been placed on general sale by the Du Pont Company after more than a year of trial marketing. This superlatively tough finish, which may be used on floors or furni-

HARD PROFITS from SOFT SILK!

Looking for the RIGHT answer to zooming production costs in your marking operations? **Silk Screening, the most versatile method of marking any size or type of object, is able to supply it.** On products of wood, metal, fabric, or plastics . . . proper Silk Screen Printing offers the perfect cost cutting solution.

Does your present marking procedure stand up to Silk Screening as a profit-maker for **you**? From split cents-per-operation to dollars saved in time and labor it will pay you to investigate a real production help . . . Silk Screening makes **every** penny count!

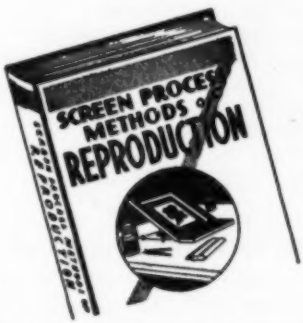
used by industry in

- **Trade Marks**
- **Code Numbers**
- **Instructions**
- **Instrument Panels**
- **Radio Dials**

For our prompt co-operation concerning your marking problem, write Dept. I-53

The NAZ-DAR Company 461 Milwaukee Ave. Chicago 10, Ill.

SCREEN PROCESS METHODS of REPRODUCTION



Cloth binding, 252 pages, 179 illustrations. Price..... **$3.00**

This new book by Bert Zahn, is complete, informative and practical and covers all known processes. It will fill the needs of everyone interested in the subject for it tells in text and shows in pictures—what can be done with screen process methods—what is required in equipment and facilities—what the difference is in the various methods—what materials to use and how to prepare them—how to proceed with the various operations from the simple first steps to the finished product. It gives lists of manufacturers who are using these processes as well as lists of products on which they can be used.

INDUSTRIAL FINISHING MAGAZINE

1142 N. Meridian St. Indianapolis 4, Ind.

ture, has superior resistance to alkali, extremely hot or cold water, alcohol, and many other substances which usually print, mar and scar ordinary varnishes.

Known as "Dulux" Interior Varnish, this finish has been used with great success on gym floors and in schools, where scuffing feet take their toll of most varnishes. Also used on floors in textile mills and other industrial plants, it has proved itself a varnish that can withstand the hardest treatment.

Applied over a clean surface, this "Dulux" Interior Varnish dries tack-free in 2½ hours, and is ready to be recoated in six hours.

Mask Washing Machine

A new machine designed to eliminate the dangers and health hazards attendant to the washing of spray painting masks has been developed.

Open pan cleaning of the accumulated paint heretofore has been wasteful of the volatile solvent and caused a more rapid deterioration of its cleaning properties, in addition to the hand cleaning of masks consuming valuable time. The scrubbing of masks with a brush often damaged the fine wire bridging which holds the free sections of some types of masks.

Inside, 40 nozzles spray cleaning solvent against both sides of paint spray masks.

Use of the automatic mask washer removes all of these troubles. It uses only 50 gallons of solvent, while 40 non-clogging nozzles direct a powerful spray against both sides of the mask. From 20 to 25 wet coats of lacquer can usually be removed in 20 seconds, using acetone. The machine's dimensions: 37x24x47-in.

A brochure on this automatic washer can be obtained from Conforming Matrix Corp., 331 Toledo Factories Bldg., Toledo 2, Ohio.

New Phosphorescent Paint

Vietze Luminescent Co., 2875 Milburn Ave., Baldwin, Long Island, N. Y., announces a new line of Neoglo Day-Nite colors. For the first time, it is said, these phosphorescent materials may be seen under normal illumination as beautiful soft pastels instead of dulled gray colors. These colors also yield a long lasting vivid afterglow in various hues. Neoglo Day-Nite colors are available in the form of paper, paints, plastics and cloth.

Corrosion Resistant Coating

A special thermosetting coating has been developed for lining tanks and for the protection of process and mechanical equipment against corrosion.

Carbo-Kote 6020 cures or hardens at normal temperatures and resists acids, alkalis and organic solvents at normal and elevated temperatures.

This coating may be used on steel, concrete, wood, glass, carbon, porce-

Everything For Wood Finishing

QUALITY

SINCE 1888

H. BEHLEN & BRO., INC.

EAST COAST
10 Christopher St.
New York 14, N. Y.

FACTORY
Kearny, N. J.

WEST COAST
1755 Berkeley St.
Santa Monica, California

Mac's FASHION SEALERS & LACQUERS

A specially formulated sealer for the first coat under clear gloss or flat lacquers provides a good body and sands easily. Also works well under varnish and enamel. A production test will prove its superiority.

MAC'S FASHION LACQUERS are available in clear and opaque for application to all kinds of surfaces. Spray easily and give good coverage in any desired sheen. Outstanding for clearness and attractiveness. **Do not get cloudy.** Write for a production test sample and descriptive folder.

The Lawrence-McFadden Co.

Headquarters for Fine Finishes Since 1875

7430 STATE ROAD *"Our 77th Year"* **PHILADELPHIA 36, PA.**

This new edition is an excellent text and reference book of 758 pages, containing a tremendous amount of authentic and complete information on industrial solvents and their uses—for example, in cleaning and finishing materials and wherever solvents are used in industry. The revised contents are organized and classified in easy-to-read, easy-to-find form for practical busy men.

Its practical contents are divided into 16 chapters, some of which include such headings and sub-headings as solvents, non-solvents, evaporation rate, boiling point, flash point, toxicity, viscosity, safe handling, hydro-carbon solvents, alcohols, ketones, acids, ethers, esters, etc. It contains many new charts, illustrations and conveniently tabulated material, all developed to help the reader grasp the factual information quickly. The alphabetical subject index covers 11½ pages.

This book will prove valuable to key men in the industrial field, who have responsibilities in connection with the cleaning, surface conditioning or preparation of products for painting, plating or polishing, and those concerned with the selection, purchase, storage, handling, testing or use of finishing materials and thinners for same.

Price $12.00—Money Back Guarantee.

INDUSTRIAL FINISHING

1142 N. Meridian St. Indianapolis 4, Ind.

lain, stoneware or rubber. No primers are required for application to any of the materials except metal and concrete surfaces. It may be applied by brush or spray at room temperature.

For further information write the Carboline Co., 7603 Forsyth Blvd., St. Louis 5, Mo., and ask for Bulletin 500 and Data Sheet C-46.

Whirling Solvent Degreaser

Strong whirlpool-like agitation of cold cleaning solvents loosens and removes dirt, oil, grease and chips from parts placed in the new Wirl Agitor Cleaning Units, according to the manufacturer, Graymills Corp., 3705 Lincoln Ave., Chicago 13, Ill.

Available in small portable and in large stationary sizes.

Parts are placed inside the heavy gauge steel tank, in a basket or heavy steel rack. The solvent is swirled in a powerful vortex, in, on and around the parts, cleaning them automatically while the operator is free to handle other work. It cleans the parts in a very few minutes.

Eight models are available, from portable units with casters to compact stationary types capable of large parts and products. Capacity range is from 5 to 330 gallons.

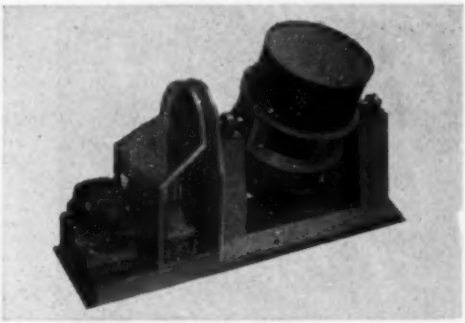
"U. S." DRUM MIXERS

SAVE TIME!!

★ Reduce handling
★ Eliminate "clean-up"
★ Get fast, thorough mixing
★ Load and unload quickly

SAVE MONEY!!

★ Mix in supplier's drums
★ Avoid contamination
★ Do variety of mixing on one unit.
★ Use rugged, dependable equipment



WRITE TODAY FOR CATALOG!
Ask For Bulletin 265

U. S. STONEWARE
AKRON 9, OHIO
PROCESS EQUIPMENT DIVISION

171-C

Devilox (Epon Resin Finish)

Characteristics of Devilox, a new Epon Resin Finish now offered by Jamestown Paint & Varnish Co., Jamestown, Penna., include the following:

(1) Excellent adhesion and flexibility on steel, aluminum, brass, tin, silver, copper and zinc.

(2) Excellent chemical resistance, especially to alkali.

(3) Excellent abrasion and mar resistance.

(4) Good heat resistance.

(5) Excellent exterior weathering properties.

(6) Over 1,000 hours salt spray resistance.

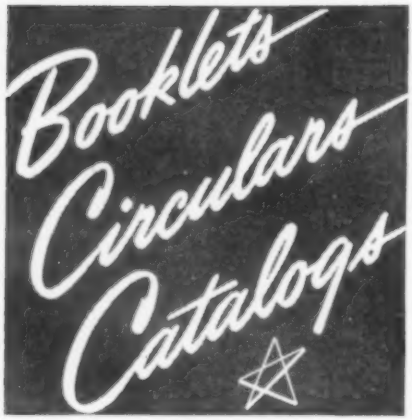
This material is available in both air drying and baking types. The coatings have been thoroughly tested in the company's laboratory for the foregoing characteristics.

Cold Solder; Metal Filler

Here is a synthetic metal that can be applied fresh from the can with a putty knife; it dries to metal hardness.

Powdered aluminum in a quick drying non-soluble liquid form supplied in a semi-fluid state for application with a putty knife or by brushing or spraying when thinned with a solvent supplied by the manufacturer. The vehicle evaporates, leaving the deposited aluminum in a smooth surface that will not crack, chip, peel or shrink. It adheres to all metals—even to aluminum or wood.

It applies in filling seams and imperfections in all metal assemblies; fills pits, blowholes and fractures in all castings. It is a product of A. L. Okun Co., 148-26 58th Ave., Flushing 55, N. Y.



Industrial Tape Corp. Issues Masking Equipment Bulletin

Several new combinations of masker, paper and tape are described in a new 4-page, 4-color bulletin just issued by Industrial Tape Corp., New Brunswick, N.J.

Government Finishes Bulletin

Bulletin T-6, containing the latest list of government specification finishes, gives both new and old specification numbers, as well as other data. This bulletin is available to manufacturers who write to Publication Dept., Andrew Brown Co., 5431 S. District Blvd., Los Angeles 22, Calif.

Safety File Handles

Shaped wood handles to fit different size files are now available for files ranging from 6-in. mill or flat to 16-in. mill or flat and half round. The handles have an alloy steel V-block inset to hold the tang of the file securely at all times. Handles are light weight, 2-oz. to 6-oz. For further information write Remont Mfg. Co., Lombard, Ill.

Blackening of Metals

A new and important theory on blackening of metals, developed in the laboratories of Lehigh University's Institute of Research and Enthone, Inc., New Haven, was reported at the annual meeting of the American Electroplaters' Society at Chicago on June 16.

The paper was read by Dr. Walter R. Meyer, President of Enthone, Inc., producer of metal finishing processes. It is the product of combined research work done by Dr. Walter Meyer, Dr. Earl J. Serfass, head of Lehigh University's Chemistry Department, and Dr. Ralph F. Muraca, Assistant Professor of Chemistry at Lehigh University.

The study was of a thermodynamic nature and explains the reactions in black nickel plating and sulphide blackening of other metals. Prior to now the chemical mechanism of these processes was not known.

The new theory enables the selection of chemicals and conditions for blackening of metals such as steel, stainless steel, zinc and cadmium.

Air Conditioning Catalog

A 60-page catalog of Westinghouse-Sturtevant products for putting air to work is now available.

A "Quick-Finder" chart simplifies the problem of selecting the right piece of equipment for the job; it does this by cross indexing equipment performance and job requirements.

The catalog contains specifications, dimensions, and descriptions of Westinghouse-Sturtevant products, also a collection of tables, charts and useful data that can be used to determine what is needed for a given job of air handling, air conditioning or air cleaning.

For a copy of this catalog 600, write Westinghouse Electric Corp., Box 2278, Pittsburgh 30, Penna.

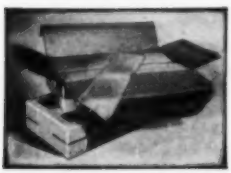
New Bulletin of "Tailor Made" Finishes for Industry

An industrial finish manufacturer's engineering service, which specializes in making conventional and special decorative lacquers and enamels to exactly meet its customers' requirements, is featured in a 4-page, 2-color bulletin 8½-x11-in. just published by Advance Paint Co., 633 Kentucky Ave., Indianapolis 7, Ind. Included in the company's line of products are bake and air dry enamels in sanitary white and all colors; wrinkle and hammer-effect finishes; metallic and opalescent decorative coatings, and clear and pigmented lacquers for fine wood and plastic finishing, and specification coatings for all branches of the armed services.

For a free copy of this new bulletin write Advance Paint Co., 601 Kentucky Ave., Indianapolis 7, Ind.

NOW! Tack Cloth in Handy Rolls *or* Cut Bulk

Cut off any size piece and use as needed.



Already cut and folded, ready to use.

Now you can get Tack Cloth packed the way it's easiest for you to use—either in 150 yard rolls of 36" wide cloth or in handy cartons—100 or more Tack Cloths to the carton.

No matter which way you buy it, you can be sure that every square inch will **stay** SOFT and TACKY until the very last bit is used up.

The Cut Bulk size is 18" x 36"—folded to 4½" x 18" for easy handling. **All of our Tack Cloth is Spontaneous Combustion-Proof, Lint-Free and Wax-Free.** It's clean and sanitary—there's no waste.

Write today for complete information, prices and samples.

Baughn Chemical Products Company

"The Tacky Wiper Specialists"

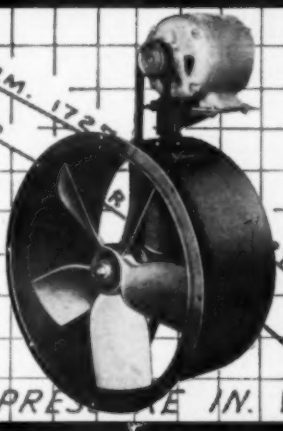
7027 N. RAVENSWOOD CHICAGO 26, ILL.

Also Individually Packed in Glassine Envelopes —144 to the Carton.

A WARRANTY OF SATISFACTION IN EVERY CARTON

M&E

HEAVY DUTY
EXHAUST UNIT
HAZARDOUS LOCATIONS



Air Delivery
900 CFM to
38,000 CFM

Designed For
- Spray Booths
- Low Temperature Ovens
- Flo Coaters
- Washers
- And other hazardous locations

- Sealed for life bearings
- Static free operation
- High bearing overload factor
- Built to standard of fire insurance underwriters
- Precision ground shaft

ENGINEERING DATA ON REQUEST

M & E Manufacturing Co., 2569 Winthrop Ave., Indianapolis 5, Ind.

ODDS ARE 2 TO 1

You'll get a cleaner surface with the improved DETROIT HANDY "TAC" RAG. Standard of your FINISHING INDUSTRY for 17 years. Removes all particles of dust, lint and sand. Non-inflammable! Order from your supplier today, or send for sample.

DETROIT HANDY "TAC" RAG

DETRO MFG. & SALES CO., INC., CULVER CITY, CALIF.

Spe-de-way

WOOD BLEACH

This single operation, controllable, Patented Bleach

- Requires No Neutralization
- Does Not Raise the Grain
- Leaves No Deposit
- Wood Is Left Neutral
- Economical . . . Dependable

Gallon Unit makes two gallons of bleaching solution. Application by spray or synthetic rubber sponge. Wood is ready for finishing in less than two hours.

Delivered prices quoted on request.

Spe-de-way Products Co.

manufacturers

3639 N. Columbia Blvd., Portland, Ore.

Lamp Bulletin

The Lindley & Co., 248 Herricks Rd., Mineola, N. Y., announces a bulletin that describes the Bull's-Eye lamp designed for close work, assembly operations and inspection. The bulletin is illustrated and shows the dual lighting merits of the lamp and its construction features.

Air Pump Bulletin

A new bulletin on Eberbach air pressure or vacuum pumps designed for laboratory applications has been published by Eberbach Corp., Ann Arber, Mich.

Available upon request, this attractive bulletin gives complete performance and size specifications, suggested uses and illustrated descriptions of the unmounted and motor-mounted models.

Booklet Describes Advantages of Abrasive Belts

Behr-Manning Corporation, Troy, N. Y., Division of Norton Co., announces the availability of an illustrated instructive booklet describing the advantages of coated abrasive belt polishing methods, "How Polisher Pete Put Economy in Polishing". This booklet is available on request; write Dept. F.P. No. 1.

Metal Cleaning Bulletin

An informative 6-page bulletin on metal cleaning, including concentrations for various cleaning applications and a handy streamlined list of cleaners for general industrial use, is offered by E. F. Houghton & Co., 303 W. Lehigh Ave., Philadelphia 33, Penna.

This bulletin briefly describes the recommended uses of each of Houghton's alkaline, emulsion, acid phosphate and surface active agent types of cleaners.

Protective Coating Catalog

A new catalog covering the entire line of Prufcoat protective coatings has been published. Subjects include a list of chemical agents against which the coatings are effective, case histories of five different types of application in as many different industries, and a 3-point analysis of the advantages of maintenance painting done the Prufcoat way.

The back page of the catalog has a list and brief description of the physical and protective qualities of eight Prufcoat products.

A copy of the catalog may be secured by writing G. Russell Hersam, general sales manager, Prufcoat Laboratories, Inc., 50 East 42nd St., New York 17, N. Y.

RONCI SPEEDIP WHIRL ENAMELER

Made In Two Sizes, R-100 and R-200 Capacity 312-cu.in. and 1206-cu.in.

IDEAL FOR LACQUERING AND ENAMELING SMALL PARTS UP TO 7-IN. IN LENGTH

CUTS COSTS, SAVES UP TO 80% OF MATERIAL

Carries up to 75-lbs. per load, and up to 30 loads per hour can be coated with lacquer or enamel in these machines.

All operations are within the machine. Dipping tank is raised, submerging the parts in the basket, and then lowered and the parts whirled, throwing off excess material. No additional outside tanks required; no cleaning necessary when changing colors; no loss of material.

Prompt Deliveries

Write for further information and submit samples to be coated.

RONCI MACHINE COMPANY

A Division of F. Ronci Co., Inc.

2 ATLANTIC BOULEVARD CENTREDALE 11, R. I.

Tumb-L-Matic Offers Bulletin on Burnishing Machine

A two-color bulletin on burnishing machines for wet-ball burnishing of jewelry and other small metal parts has been published by Tumb-L-Matic.

Laboratory service is available to help solve burnishing, precision finishing and deburring problems, and to help select the correct machine for any given job.

For your copy of Bulletin BB-52, write Tumb-L-Matic, Inc., 4510 Bullard Ave., New York 70, N.Y.

Anti-Rust Paint Bulletin

A new application bulletin has been published containing information on the selection and use of anti-rust paints for all metal surfaces.

The bulletin No. L-4285 contains a description of the chemical properties of anti-rust paints and discusses the various methods of applying these paints in industrial and marine uses. It also explains how and when to use colored finish paints over anti-rust paints.

For copies, write Paint Corporation of America, Fidelity Building, Clevelaand 14, Ohio.

Wood Finishers & Refinishers Catalog of "Everything"

A new 54-page catalog of "Everything for Wood Finishing" is now ready for free distribution by H. Behlen & Bro., Inc., 10 Christopher St., New York 14, N.Y., and 1755 Berkeley St., Santa Monica, Calif.

The Book contains illustrations and brief descriptions of many products and lists others that are available for finishers and refinishers. For example, abrasive papers, steelwool, pumice, rottenstone, brushes, refinishing kits, burn-in knives and heaters, color guides for enamels and stains, all kinds of finishing and patching materials and supplies.

Mechanical Air Cleaner Catalog

Water, scale, dirt and other foreign material in compressed air lines will ruin any piece of pneumatic equipment in a short time.

A catalog is available which describes the Aridifier, a mechanical cleaner that removes 92% of oil, moisture and dirt from compressed gas and air lines.

Write for catalog 252 from Logan Engineering Co., 4901 W. Lawrence Ave., Chicago 30, Ill.

Industrial FINISHING Editorial

Your Office Modern? Pleasant? Quiet?

What about the office interior? Has it been done over or modernized lately? It is not necessary to retain the 18th century drawing room style. Some of these offices still have wood wainscot, heavy wood and obscure glass (true "bank-style") partitions, and "stand-up" old fashioned bookkeepers' desks.

Accoustical tile ceilings will absorb much of the clatter of typewriters and voices. Why not remove the old partitions entirely, and perhaps replace a few with modern light weight glass and metal enclosures to make private offices?

Cool appearing pastel shades on walls, medium light finishes on office furniture, and suitably placed fluorescent lights will spruce up the place, make for better work, and *it will favorably impress visitors.*

Easy to Find and Use The Best Way

A set of definite fundamental rules governs all methods of applying organic coatings to the surfaces of various products. Each method of application has its own specific rules, many of which are peculiar to that method only. To produce a permanent quality finish economically, these rules must not be disregarded.

How much specific knowledge do you, or the men entrusted with your finishing operations, have of these rules, of the equipment and its correct use, of the different materials and what can be expected of them? In talking with plant operators, superintendents and finishing foremen, I have often heard the remark, "Well, we do it this way. It may not be just the right way, or perhaps the best way, but we get by."

Getting by is not good enough—not in these days when we have at our disposal such a variety of materials, equipment, supplies and other aids to quality production—as well as sources of practical information and training in skillful and economical procedure.

Many sources of accurate information are available — books, bulletins and magazine articles on every phase of product painting and finishing. A number of schools and colleges offer adult courses in modern finishing procedure. Some of the larger equipment manufacturers offer courses covering the use of their equipment as well as methods of application. With all of these means of study and learning accessible to the personnel in every plant where products are painted or finished, it is a mark of carelessness and indifference to be "just getting by."

Installing Equipment? Plan Greater Capacity

When new equipment is installed in a plant, every wise manufacturer makes some allowance for more capacity than is needed at the time of installation. If it is coating equipment, for example, what is selected

Revolutionary New

"SKOTCH-RUB"

RUBBING LIQUID

HAILED AS THE MOST IMPORTANT ADVANCE TO RUBROOM PROCEDURES SINCE THE ADVENT OF AIR DRIVEN SANDERS.

RUBROOM PRODUCTION *hustles* WITH PERFECT, UNHURRIED RESULTS. MOST ECONOMICAL TO USE. WRITE FOR 5 GAL. AT PREPAID DRUM PRICE.

MFG. ONLY BY **OLD-NORTH MANUFACTURING CO.** LENOIR, N. C.

When You Need Dependable Production Finishes . . .

***Specify* NEW PERIOD**

Whether you've got a tough problem . . . or a run-of-the-mill job . . . specify New Period and be sure of top quality finishes.

- Fillers and Stains
- Lacquers—Clear and Semi-Gloss
- Sealers
- Lacquer Enamels—Flat and Gloss
- Synthetic Enamels

Write for 5 Gallon Working Sample at Drum Price

MANUFACTURERS OF FINE WOOD AND METAL PRODUCTION FINISHES

NEW PERIOD *Production Finishes*

ESTABLISHED 1911

NEW YORK WOODFINISHERS' Supply Co. INC.

109 IMLAY STREET BROOKLYN, N. Y.

HERE ARE enumerated in this remarkably valuable book of 544 pages, all of the common and a variety of unusual and seldom heard-of defects and objectionable features that occur in paint, varnish, lacquer and synthetic enamel finishes; their probable, possible or real causes given; the effects described, and means of preventing and remedying these troubles fully outlined.

Chapters deal with these defects and troubles as they occur, 1) during or as a result of storage and preparation of materials before finishing; 2) when the materials are applied by various production methods and equipment; 3) during handling, processing or drying after application; and finally, 4) when and after the finished goods are shipped, displayed, stored or placed in service.

Defects covered include many more than could be named here, but to mention just a few there are; runs, sags, tackiness, films, too thin or too thick, slow drying, orange peel, aligatoring, wrinkling, pimples in films, pin holing, cracking, blistering, lifting, bleeding, blushing, blooming, discoloration, rainbow effects, gloss and dull areas, grained appearance, and scores of others.

Practical information is also revealed in reference to safety precautions to prevent fires or accidents in paint shops and finishing rooms, skin troubles of workmen, poison from paint materials and fumes.

By referring to the "subject Index" of 84 pages in back of the book, it is possible to locate quickly, the answer to any particular failure, cause or remedy.

Price $12.00—Money Back Guarantee.

INDUSTRIAL FINISHING

1142 N. Meridian St. Indianapolis 4, Ind.

and purchased will be larger than present production demands. Likewise the conveyor that is put in will be able to carry a heavier load and it will be capable of operating at faster speeds than those presently used. Bake oven temperatures can be increased within reasonable limits to allow for speeding up the conveyor and reducing the length of time required for baking.

These margins of safety are necessary, and it is important that they be maintained. If safety margins are gradually narrowed until the equipment is being used at its top capacity, and even beyond capacity, and if this condition continues over an extended period of time, some kind of breakdown or failure is almost sure to occur and usually these failures occur at a most inopportune time.

Encroachment of safety margins is likely to happen in these days when so many plants are working on defense jobs in addition to maintaining civilian production. Some plants are using their equipment around the clock; others are using it for 20 hours out of the 24. If safety margins are held, and with proper care and maintenance, the equipment can go on giving efficient service indefinitely.

J. Holland & Sons Expands Plant

J. Holland & Sons, Inc., manufacturer and distributor of metal finishing equipment, Brooklyn, N. Y., announces the expanding of its plant facilities in a new 3-floor steel and reinforced concrete fireproof building at 45 Johnson Ave., in the heart of industrial Brooklyn. The new plant will be a short distance from the firms present location at 276 S. 9th St., Brooklyn, N.Y.

The new building will have 60,000-sq. ft. additional floor space to house factory equipment and executive offices. According to Mr. Charles Holland, president, "The expansion will enable us to keep one step ahead of the latest developments in research and new product design for metal finishing equipment, as we have done for close to a half century. Our facilities for distributing the finest in finishing equipment will also be expanded."

No. 150
SpeedWay SpeedSander Sands, Rubs, Polishes
. . . FOR DRY OR WET FINISHING
Motor-Driven
3/16" Orbital-Motion

Powerful, direct-connected (no gears), 3450 r.p.m., 100-120 v AC air-cooled motor. All sealed ball-bearing construction. Die-cast aluminum housing, polished. All-position handles. In hand weight only 5 lbs. Insulated with ground wire for wet as well as dry sanding or rubbing. Available accessories—deep contour pads, surface plates, felts, etc. Takes any sheet abrasives—3 covers 4½" x 6½" from standard 9" x 11" sheet.

A time saving quality tool priced so every worker can have one.

$34.50

Write for Circular

SpeedWay MANUFACTURING CO.
1886 So. 52nd Ave., Cicero 50, Ill.

Fire Prevention is Making Progress

According to an insurance safety expert, it is indicated that there will be a reduction in industrial fire loss in the United States in 1952.

The dollar loss from fire in 1951 was about 6% above 1950, as reported by Nelson M. Knowlton, president of the Federation of Mutual Fire Insurance Companies. Taking the inflated dollar—and the increased number of buildings — into consideration, this slight increase indicates that progress is being made in reducing the actual loss of physical property.

Making progress in the right direction is laudable, but there is still plenty of room for improvement. Fire is no respecter of time or place. There are definite rules, besides common sense, for fire prevention. Every plant should have them and enforce them.

Multiple Colors in Line

★ Furniture factories that run several colors sometimes find it extremely difficult to control one or more of these colors. The answers are not always apparent, but one thing that can be accepted as a given fact is: those manufacturers who have a minimum of trouble, even though they are using as high as six or more colors in their lines, are using a common color in each of their finishes. In other words, their colors could be described as exaggerated variations of one color, and these variations may

---

★ *Guest Editorial . . . Many readers can write an excellent editorial—two or three paragraphs that present a timely suggestion or valuable idea which will stimulate thought on a live subject. The Editor welcomes guest editorials and pays for those used.*

range from a slight tint to an absolute base.

It has also been noticed, using the same method of analyzing, that in nearly every case where a manufacturer is in constant trouble with only one color out of a group of several, the finish that is causing the trouble has nothing in common with any of the other production colors, and the more completely different colors that are used the more production problems multiply.

When you work out your line of colors, try to keep at least one color in common through the entire line. This still gives you a wide range—from an off white to the darkest finish you need.—*Herman Hardesty.*

Michigan Oven Co. Moves Office

In order to facilitate the handling of its increased business, the Michigan Oven Co., Detroit, Mich., is moving its office to new and larger quarters. The company's offices now occupy the entire sixth floor of the Architects Building, 415 Brainard St., Detroit.

Write for Catalog of
Paint Testing Apparatus
GARDNER LABORATORY
Bethesda 14, Md.

PAINT STRAINERS

FOR STRAINING LACQUERS, ENAMELS, PAINTS OR VARNISHES

Made of heavy paper stock with cloth inserts in coarse, medium, fine or extra fine mesh. 6" in diameter.

LOUIS M. GERSON CO.
BOX 175 MATTAPAN, MASS.

Welcome Suggestions

★ With the wide choice of finishing materials on the market, there should be no reason for your workers to have to take the attitude, "Since this is what I am supposed to use, I'll make the best of it and say nothing." Encourage men in the finishing department to voice their opinions freely. Even when some of their suggestions sound like complaining, investigate what lies behind them.

At times you can secure information from the manufacturer or his representative that will enable you to clear up any difficulties on the production line. Occasionally the opinions of your finishing employees may lead you to seek out another and more suitable product.

When you relax your alertness, you may find your men are maintaining satisfactory results only at the cost of slower work, more rejects, or tedious and time-consuming methods. Unless you frequently ask employees what they think of finishing supplies in their day by day performance, those factors that up costs or lower morale in the department may be overlooked long enough to reduce overall efficiency.—*G.M.D.*

Skeleton in Closet? Let's Eliminate It

Many finishing systems like many families have a skeleton hidden away in a closet. In the case of the family it's better to keep that closet door shut. Not so with the finishing system. Here it is better to drag the skeleton out and get rid of it.

Weak places in the finishing system are not confined to either small, medium or large plants; size makes no difference. They may be hidden away in methods, equipment or materials. Studying the system from within the

organization will not always reveal the weaknesses, for it must be assumed that men who live with a system week after week and year after year would have discovered the weak spots as they developed, and would have taken steps to eliminate them. Perhaps these men get into a rut; perhaps they are too close to see them. It must be attributed to either of these reasons, for most men charged with the responsibility of plant management keep themselves informed on new and improved methods, equipment and materials.

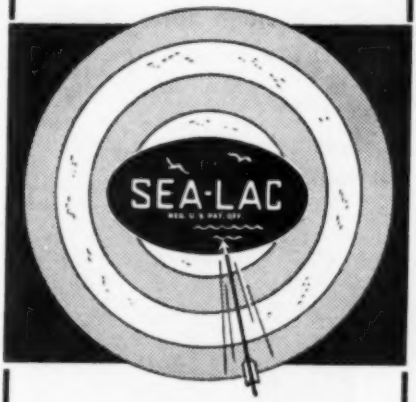
Regardless of how long the system has been in operation or how apparenly efficient it may seem to function, there is always the possibility that it could be improved. Perhaps it would be wise and profitable to employ a reputable firm of finishing engineers to make a complete survey and report their findings. Some pet theories may be exploded; some traditions may have to be sacrificed, but in the process those skeleton bones will cease to rattle in that closet, and either or both a better or more economical finish will result.

Chas. N. Chalfant Sales Mgr. Hanson-Van Winkle-Munning

Hanson-Van Winkle-Munning Co., Matawan, N.J., announces the appointment of Charles N. Chalfant as manager of industrial cleaner sales. The move is designed to offer expanded sales and service facilities to those industries faced with the problem of cleaning both ferrous and non-ferrous metals just before electroplating, anodizing, painting or finishing.

Mr. Chalfant has had many years of experience in cleaner sales and service engineering, with a background in chemical and metallurgical studies at Carnegie Tech and the University of Pittsburgh.

RIGHT ON THE TARGET



ON YOUR GOVERNMENT SPECS

Duralac's got what it takes to come up with the right finish to meet your government requirements. Long experience. Extensive laboratory facilities. Skilled personnel. That goes for your own production schedules too.

- Lusterless, semi-gloss lacquers
- Wrinkles
- Primers
- Thinners
- Specialty Products

Duralac Chemical Corp.
84 LISTER AVE., NEWARK 5, N. J.

How to improve

METAL PRODUCTS

through better finishes

Here is a book that answers all the questions on finishing metal products and shows the methods, techniques, and cost factors in producing them.

Just Published

FINISHING METAL PRODUCTS

New Second Edition **describes all recent developments in this field.**

By HERBERT R. SIMONDS and ADOLPH BRUGMAN, Consulting Engineers. 352 *pages*, 5x8, 135 *illustrations*, $5.50.

A COMPLETE PRACTICAL MANUAL covering usual types of finishing—galvanizing, polishing, plating, lacquering, painting. Also discusses fully such subjects as use of color and production and use of prefinished materials.

COVERS FINISHING from a business and sales standpoint. Deals with methods that improve results and reduce costs. Helps you determine types of finish with greatest sales appeal.

EXPLAINS SHOP TECHNIQUES. Tells how to reduce polishing and buffing costs. Gives techniques for cadmium plating, chromium plating, spray coating. Tells how to use enamels and lacquers in metal parts production.

This up-to-date, handy manual should be at the finger-tips of plant managers, superintendents and foremen. Send your remittance today to

INDUSTRIAL FINISHING

1142 N. Meridian St. Indianapolis 4, Ind.

Random Comment on the Industrial Scene

(Continued from page 8)

crushed to about the size of wheat grains, mixed with recycled oil, then pumped into the hydrogenator where gaseous hydrogen is introduced. The temperature is raised to about 932° F., and pressure is exerted to 6,000 lbs. per sq. in. The mixture becomes liquid, and is pumped to various hot separators from which the chemicals are obtained.

Some of the chemicals include phenol, cresols, analine, quinoline, naphthalene and toluene, all of which are widely used by industry.

* * *

Kills Odor and Insects. Hy-Tron is a machine that combines both odor and insect control. It will destroy odors and kill flying insects simultaneously. By a mere flip of a switch it will perform either of these functions separately.

This new compact machine has an electric fan for forced draft to produce freshened air in all parts of a given area; and a heating element that vaporizes an insect tablet for killing flying insects. In addition, the unit is properly fused so that it meets Health Department and Federal Safety Requirements. It has a pilot light that shows when it is operating and a thermostat for automatic control.

* * *

Metal Endurance. A new and much faster method of testing the endurance limits of metals and alloys has been discovered by Dr. J. L. Rosenholtz and Prof. D. T. Smith of Rensselaer Polytechnic Institute.

They found that metals, when heated, expand in direct ratio to the stress the sample already had undergone. By measuring this expansion it is possible to determine the load that a moving

part can sustain indefinitely without breaking.

Their test, called D/S dialstrain method, requires up to ten hours, including the time needed for preparing the sample. This cuts months, and in some cases a year, from present testing methods.

* * *

Fadeometer. The Atlas Fadeometer shown here produces intense ultraviolet rays to simulate the effect of extended exposure to sunlight on colored vinyl material. This machine

provides the means for making accurate accelerated tests to determine ratio of discoloration and fading of various paint, varnish, lacquer and enamel coatings.

* * *

Paints Wire Fence: A method of painting factory wire fences that puts 99% of the paint on the wire is announced by a Chicago concern (name on request).

A special long-nap, lambs-wool roller, thoroughly saturated with Rust-Oleum paint does the trick. The roller is dipped into a 5-gallon container of material and pulled over a flat board surface to remove running surplus material. The roller is then applied to the area to be coated. Even barbed wire on top of the fence can be roller coated, although the pipe framework and supporting arms holding the barbed wire are best done by brushing after the fence has been roll-coated.

* * *

Roof OK? A roof that was in good condition last fall isn't necessarily that way today. Winter weather—snow, ice, high winds and zero temperatures—is pretty rough on roofs, and the best roof in the world can stand only so much punishment.

Most people assume that if the roof

LANLY
FINISHING OVENS
THE LANLY COMPANY • 770 PROSPECT AVE
CLEVELAND, OHIO
Write for Information & Literature.

PAINT MIXER

MIRACLE 5 GALLON
PAINT REJUVENATOR
All paint restored to original consistency without opening the can.
2 minutes per gal.
MIRACLE PAINT REJUVENATOR COMPANY
128 E. 10th St., St. Paul 1, Minn.

doesn't leak, it's all right. That's dangerous thinking. An inspection is important. Alternate freezing and thawing, followed by spring rains and summer sun, can do a lot of damage. A minor preventive repair today can forestall a costly major job a little later on.

There are many places on the roof and above the roof that can cause trouble and cost money.—*Tremco.*

George L. Kittle Returns to Fred'k A. Stresen-Reuter

Fred'k A. Stresen-Reuter, Inc. announces the return of Major George L. Kittle from 22 months active duty with the Air Force in Korea and Japan.

Mr. Kittle will resume his former duties as sales representative, calling on the paint, varnish and printing ink trades in Chicago and the Middle West. He hopes to renew acquaintanceship with all of his friends made during the period between World War II and his recall to the Air Force.

FOR SALE
Slightly used
"American" Self-Cleaning
CONTINUOUS
AIR FILTERS
Type S, No. 2999, 4-ft. x 12-ft.
George Koch Sons, Inc.
EVANSVILLE 4, INDIANA

Serving THE SOUTHEAST
• LACQUERS • GLAZES
• SEALERS • PIGMENTED WIPING STAINS
• FILLERS • NGR STAINS
• TONERS
Complete Technical Service At Your Disposal
SNYDER BROTHERS COMPANY
Manufacturers of Quality INDUSTRIAL LACQUERS
P. O. BOX 148 — TOCCOA, GEORGIA

Pocket Slide Rule Free

A free 6-inch pocket slide rule is offered by the DuBois Co., Inc., to readers of *Industrial Finishing*. Accurately made, it is useful for all regular slide rule purposes. In addition, it carries a Decimal Equivalent Scale, a 6-inch rule and metric scale, and a table of equivalent settings.

Readers of *Industrial Finishing* may obtain their slide rules by addressing their requests, on their company letterheads, to The DuBois Company, 1120 W. Front St., Cincinnati 3, Ohio.

Binks Relocates its Cleveland Office and Warehouse

The Binks Mfg. Co. announces the relocation of its Cleveland office and warehouse. The new address, 1241 W. 9th St., Cleveland, Ohio. Same telephones, MAin 1-3602 and MAin 1-3079.

The Cleveland office—now with increased office and warehouse space—will continue to serve jobbers and customers in the Ohio, Indiana and Northern Kentucky territory.

Mr. B. R. Fulton is District Manager and Mr. H. G. Pankratz is District Engineer.

Bert Gittins Joins DuPont in Greensboro, N.C., Area

DuPont's Finishes Division announces the employment of Bert A. Gittins, of Grand Rapids, Mich., as a wood finishing engineer. Mr. Gittins has been assigned to the Finishes Division's Field Service Laboratory at Greensboro, N.C., where his services will be available to furniture manufacturers of the Southeastern States who desire help in the development of new color effects.

Mr. Gittins has been associated with the furniture finishing industry in the Grand Rapids area for the past 22 years.

FPRS Holds Sixth Annual Meeting

The Forest Products Research Society's sixth annual meeting is being held in Milwaukee, June 23-26.

Stephen D. Pryce, technical quality control and lumber purchaser for the John Widdecomb Furniture Co., is scheduled to speak on "Kiln Drying and Moisture Control in a Furniture Factory."

George E. Power, senior project engineer, Formica Co., Cincinnati, will give his listeners the pitch on Stratawood in his paper, "New Developments in Plastic Wood Laminates."

Reports are to be made on forest products research, lumber handling, fiberboard and chemical utilization, furniture manufacturing and finishing, veneer and plywood and allied forestry subjects.

Demand for Die-Cut Masking Has Doubled

According to Panoco, 505 Carroll St., Brooklyn 15, N.Y., the industrial demand for die-cut masking tape has doubled due primarily to the fact that these masks provide an efficient and economical method of surface protection during finishing or painting operations.

Die-cut masking tapes are extensively used in plants pressed for speed and accuracy, where masking operations are required for defense orders. They are also used in civilian work.

The company cuts 3-M masking tapes to customers' exact specifications, then delivers the individual pieces. Panoco claims to have facilities to solve any masking problem.

Topper Equipment Co. Builds Another Plant

Topper Equipment Co., manufacturer of "Circo" industrial and automotive vapor degreasing equipment and steam cleaning equipment, announces that due to the expanding volume of business it has become necessary to create additional facilities for the manufacture of equipment. For that purpose a new plant is being constructed by Topper for the manufacture of its Circo equipment in Clark Township (Rahway), New Jersey, adjacent to Lehigh Valley Railroad. This plant will be approximately 30,000-sq.ft.

All manufacturing is now done at the factory in Matawan, N.J., which consists of approximately 34,000-sq.ft. Both plants will be operated, with Clark Township being designated as Plant No.1 and Matawan as Plant No.2.

DeVilbiss Spray P't'g School to West Coast This Summer

The DeVilbiss Company spray painting school, alma mater to thousands of spray painters throughout the world, is being transferred to the West Coast where classes will be conducted for two months beginning July 1.

Emil F. Frey, the company's director of sales promotion and advertising, said this marks the first time in the school's 26-year history that the doors of the Toledo classroom will be closed. Upon conclusion of the West Coast sessions, regular classes will be resumed in Toledo.

George I. Stoddard, instructor in charge, will conduct the classes which are to be held at the University of Santa Clara with actual shop practice in the nearby DeVilbiss Santa Clara plant.

Enrollment in the school is free of charge and Mr. Stoddard expects to have sessions for distributors, industrial and automotive users. Information about the school may be obtained by writing to the DeVilbiss Santa Clara, California plant.

New and Improved

AUTOMATIC HYDRAULIC DIPPING MACHINE

In any size to meet your requirements, simple in construction and foolproof.

The machine can be adjusted instantly to any finish used, such as paint, varnish, enamel, lacquer, etc. Write for circular.

The UNITED MACHINE CO.
Wausau, Wisconsin

NATIONAL PAINT DICTIONARY

By JEFFREY R. STEWART

Terms included in this dictionary may be divided into six categories (though the largest proportion falls into the first two groups) as follows: 1) industrial raw materials used in the production of paints and allied products; 2) trade names of raw materials and certain finished products; 3) terms describing processes, methods, systems, etc.; 4) terms denoting scientific instruments used primarily for evaluation purposes; 5) terms denoting colors, optical effects, textures, etc., and 6) miscellaneous terms which give general information, plus several pages of reference tables and calculations.

704 pages 6x9 inches.
Bound in Green and Gold.
Price per copy, $7.50.

INDUSTRIAL FINISHING
1142 N. Meridian St., Indianapolis, Ind.

PARDON US, BUT are your WRINKLES SHOWING

WE GUARANTEE OURS WILL — UNIFORMLY AND CONSISTENTLY in 32 standard colors

NATIONAL LACQUER & PAINT CO., INC.
7415 S. GREEN ST. CHICAGO 21, ILLINOIS

TOMORROW'S Products Tested TODAY

A service to aid industry in producing longer-lasting and better-looking products. Quick predetermination of durability and permanency by actual exposure test in South Florida. Write us today for full information.

SOUTH FLORIDA TEST SERVICE
EST. 1931
4201 N. W. 7th St. Miami 34, Fla.

PEARL ESSENCE

"Astralucine Brand"
Produces a high luster
on a variety of finishes

Write for your free copy of our informative Technical Bulletin
"Pearl Essence Finishes"
—what they are and how to use them.

Argenta Products Co.
EASTPORT, MAINE

CLASSIFIED ADVERTISING

The rate on ads appearing in this department is $1.00 per line of 6-pt. light face type, per insertion. Minimum charge, $5.00. Ads set in 8-pt. extra bold face type cost $2.00 per line, per insertion.

PAINT SALESMAN WANTED.

Specialist in product finishes wanted by company with top line of well established production finishes. Write stating full details including experience in this field. Address IF-904, care Industrial Finishing.

REPRESENTATIVE WANTED.

Midwest manufacturer of industrial ovens, heaters, air make-up units, spray booths and washers wants representation in Pennsylvania and New York territories. Should be experienced in low temperature applications and capable of making complete analysis of plant and production requirements. Excellent opportunity. Commission or salary and commission, depending on qualifications. Address IF-911, care Industrial Finishing.

PAINT SALES PROMOTION MANAGER AVAILABLE SOON

Heavy experience in Industrial Finishes and Trade Sales management advertising and merchandising. Over 12 years "on the firing line" selling to industry and jobbers. Will relocate for desirable connection. Exploratory correspondence welcome. Address IF-899, care Industrial Finishing.

FINISHING FOREMAN WANTED.

Nationally-known manufacturer of novelty furniture in mid-south has an opening for a finishing foreman, capable of supervising finishing and rubbing departments. He must be able to produce quality finish on a production basis. In reply give complete and full details and references. Address IF-909, care Industrial Finishing.

SALESMAN WANTED.

Manufacturer of quality line of Industrial Finishes offers an unusual opportunity to industrial finishes salesman. Write ROCKFORD VARNISH CO., Rockford, Illinois.

FINISH FOREMAN WANTED.

Large furniture manufacturer in South has opening for experienced Foreman accustomed to high-speed production to take complete charge of finishing room employing 40 people. Good salary. Address IF-900, care Industrial Finishing.

EXCELLENT POSITION VACANCY—LABORATORY.

Group leader for synthetic enamel and clear formulations for industrial coatings end use. Experience required. Positions for chemists and formulators are also open. Reply to J. Holle, Finishes Division, INTERCHEMICAL CORP., 1754 Dana Ave., Cincinnati 7, Ohio, giving complete qualifications including salary requirements.

WANTED.

Man with experience in the formulation and application of wood finishing materials, particularly stains and fillers. This position is open with a progressive industrial finishing concern located in the East. Degree in chemistry or chemical engineering preferred but not essential. Please reply, giving all information as to age, experience, family connection, present or past employers, and salary desired. Address IF-902, care Industrial Finishing.

IF YOU KNOW THE METAL DECORATING TRADE . . . .

and you are well acquainted with users of roller coating products, here is an opportunity with unlimited scope and future as sales representative for a manufacturer of metal decorating finishes. This is the ideal situation for an aggressive man who feels "hog-tied" in his present job . . . who is looking for unlimited earnings, a wide territory without strings or restrictions and all-out cooperation from top management. Company is located in the East, long established and widely recognized for its technical leadership. Our employees know of this ad so feel free to write us. We will be glad to arrange an interview at your convenience and at our expense. Address IF-903, care Industrial Finishing.

MAN WANTED

To take complete charge of lacquer manufacturing and lacquer product development department for prominent manufacturer of wood finishes located in Midwest. Must be excellent formulator. Degree in chemistry desirable but not mandatory. Address IF-901, care Industrial Finishing.

UNUSUAL LABORATORY POSITION AVAILABLE.

Our business is expanding. We are looking for the right man who has had experience in formulations relative to Industrial Synthetic Resin Enamels—as well as Industrial and Architectural Finishes in general. College graduate chemist not absolutely necessary, but must have good background of paint knowledge and laboratory experience. State qualifications and salary expected. Write P. O. Box 190, Phoenixville, Penna.

SALESMAN WANTED TO HANDLE FLOCK.

Large well rated manufacturer of all grades of flock wants salesman to represent them in selling flock to the New England Textile trade. Salesman with already established line of Textiles or Adhesives for the cloth coating trade preferred. CELLUSUEDE PRODUCTS, INC., Rockford, Illinois.

MANUFACTURER'S REPRESENTATIVE WANTED

For Arrowhead Adhesives, Duratite Wood Dough and Surfacers. Some states are still available on an exclusive basis. Prefer men with non-competitive lines calling on industrial accounts and dealers. Products can be handled on a commission or distributor basis. More information on request. WEBB PRODUCTS CO., P. O. Box 520, San Bernardino, Calif., or Box 64, Norcross, Georgia.

SALES REPRESENTATIVE WANTED

To sell ovens in New England. Manufacturer builds equipment to cover every phase of heating, drying and baking. Wonderful opportunity for hard worker. Commission basis. Address IF-908, care Industrial Finishing.

SOLVENT CLEANING SERVICE.

Dirty lacquer solvent can be shipped to us for distillation and returned to you clean and ready for use. Within 200 mile radius of Louisville a substantial economy can be realized. Cost runs from 14c to 19c per gallon. KENTUCKY COLOR & CHEMICAL CO., 600 N. 34th St. Louisville 12, Ky.

WANTED TO BUY.

Will buy your dirty Thinners and Solvents. Send samples or letters giving approximate contents and solids. Address THE JOHANN CO., 8547 S. Ashland Ave., Chicago, Ill.

BOOKS
On Finishing Available

"MODERN ORGANIC FINISHES—Their Application to Industrial Products" (452 pages) new $8.50

"CHEMICAL FORMULARY" (Vol. IX) 7.00

"FINISHING METAL PRODUCTS"—2nd edition (352 pages) 5.50

"PRACTICAL FURNITURE FINISHING" (112 pages) 1.50

"FURNITURE FINISHING" (543 pages) 4.00

"SPRAY PAINTING"—Industrial and Commercial (169 pages) 2.00

"THE MIXING OF COLORS AND PAINTS" (292 pages) 2.50

"WOOD FINISHING" (361 pages) 2.50

"NATIONAL PAINT DICTIONARY" (704 pages) 7.50

"MODERN POLISHES AND SPECIALTIES" (313 pages) 7.50

"PRACTICAL COLOR SIMPLIFIED" (128 pages) 5.00

"GRAINING"—Ancient and Modern (224 pages) 4.00

"THE SILK SCREEN PRINTING PROCESS" (225 pages) 4.50

"SCREEN PROCESS METHODS OF REPRODUCTION" (252 pages) 3.00

"THE SCIENCE OF WRINKLE FINISHING" (204 pages) 5.00

"THE SCIENCE OF MODERN WOOD FINISHING" (386 pages) 6.00

"PAINT & VARNISH TECHNOLOGY" (509 pages) 8.00

"METALLIC AND NON-METALLIC COATINGS FOR GRAY IRON" (76 pages) 1.75

"PAINT FILM DEFECTS — Their Causes and Cure" (544 pages) 12.00

"INDUSTRIAL SOLVENTS" (764 pages) 12.00

"FINISHING MATERIALS AND METHODS" (320 pages) 4.00

Cash Must Accompany Order—
Send for Descriptive Circular

INDUSTRIAL FINISHING
1142 N. Meridian St. Indianapolis 4, Ind.

JOBBERS SETUP.

Wanted complete industrial finishing line for resale in the east. Will consider Western or Southern manufacturer. Address IF-905, care Industrial Finishing.

BAKING ENAMEL FOR SALE.

4000 gallons of top quality glossy baking enamel in assorted colors. Still in original drums. Will sell all or part. Address IF-910, care Industrial Finishing.

FOR SALE.

Rutherford Roller Coating Machine. Size 12-50-inch. Complete with rollers and motor. Excellent condition. DICO COMPANY, Des Moines 5, Iowa.

FOR SALE.

Slightly used "American" self-cleaning continuous air filters. Type S, No. 2999, 4 ft. x 12 ft. Write GEORGE KOCH SONS, Inc., Evansville, Indiana.

PAINT FACTORY FOR SALE.

Modern all respects. Explosion-proof equipment and fixtures. Manufacturing capacity about 4,000,000 gallons annually. Located Eastern seaboard. Address IF-906, care Industrial Finishing.

FOR SALE.

Rotary 19-spindle spraying machine—electric drive—continuous or intermittent. 3 guns, water sep., pressure gauge. No tank or booth. Prod. 1M pieces per hour. $450.00. NESBIT INDUSTRIES, INC., 1823 Milwaukee Ave., Chicago 47, Illinois.

FOR SALE.

BRAND NEW CONVEYORIZED SPRAY AND DEGREASING SETUP. Complete with Model V-800 vapor flush Detrex degreaser. 12-foot spray booth. 40-foot long by 72-inch high infra-red electric oven, with Chromolox tubular elements. Four zones with individual timing and rheostat controls. Also top and bottom shut-off control to accommodate various size pieces. 310-ft. Richards-Wilcox Conveyor through degreaser with variable speed up to 9-ft. per minute. Address IF-907, care Industrial Finishing.

FORD CUPS
THE VOL-U-METER COMPANY
Buffalo 16, New York

"Our Country's Strength Is Created . . ."

REESE H. TAYLOR
President, Union Oil Company of California

"Our country's strength is created by the responsibility and solidarity of individual citizens in a self-chosen government and economy. It can—and must—be perpetuated against all who seek to undermine it. The men and women who invest regularly in United States Defense Bonds are contributing to our national integrity and to the traditions of personal independence so characteristic of a free people."

Every pay day, 6,500,000 employed men and women . . . "are contributing to our national integrity and to the tradition of personal independence . . ." by the systematic purchase of United States Defense Bonds.

Let's look at a few figures:

- the cumulative purchases of 6,500,000 payroll savers add up to $130,000,000 per month.
- the number of individual "E" Bonds sold in 1951 totaled 68,069,000 pieces —8% more than in 1950.
- purchases of $25 and $50 E Bonds—the denominations popular with Payroll Savers were greater than the sales of $500 and $1,000 E Bonds.
- the *cash value* of Series E Bonds held by individuals on December 13, 1951, amounted to $34,727,000,000—$4.8 billions more than the cash value of Series E's outstanding in August, 1945.

For help with your Payroll Savings Plan, phone, wire or write to Savings Bond Division, U. S. Treasury Department, Suite 700, Washington Building, Washington, D. C.

The U.S. Government does not pay for this advertising. The Treasury Department thanks, for their patriotic donation, the Advertising Council and

INDUSTRIAL FINISHING

INDEX to Advertisers

Advance Paint Co. ..... Front Cover
Allied Finishing Specialties Co. 6
Aluminum Co. of America 34-35
Argenta Products Co. 128
Atlas Powder Co. 65

Barker Chemical Co. 17
Barrett Co., Leon J. 99
Barrett Varnish Co. 75
Baughn Chemical Products Co. 115
Behlen & Bro., H. 111
Better Finishes & Coatings, Inc. 91
Binks Mfg. Co. 10-11
Buffalo Solvents & Chemicals Co. 43

Capitol Machine Co., The 39
Carl-Mayer Corp., The 50
Classified Advertising 128
Clinton Co., The 53
Coast Paint & Lacquer Co., Inc. 79

Day & Co., James B. 83
DeBurgh Conveyors 88
Despatch Oven Co. 21
Detrex Corporation ..... Third Cover
Detro Mfg. & Sales Co., Inc. 116
DeVilbiss Co., The 18-19
Dolan & Co., V. J. 5
DuBois Co., The 12
Du Pont de Nemours & Co., E. I. 68-69
Duralac Chemical Corp. 123

Egyptian Lacquer Mfg. Co., The 20
Enthone, Inc. 1

Gardner Laboratory 122
Gerson Co., Louis M. 122
Glidden Co., The 84-103
Grand Rapids Varnish Corp. 2
Gray Co., Inc. 85

Hercules Powder Co. 73
Hilo Varnish Corp. 51

Interchemical Corp. ..... Second Cover

Jamestown Paint & Varnish Co. 81

Kirk & Blum Mfg. Co. ..... Back Cover
Koch & Sons, Inc., George 49-126-130

Lanly Co., The 125
Lawrence-McFadden Co. 111
Lilly Varnish Co. 60-61

Maas & Waldstein Co. 77
Mahon Co., R. C. 22-23
Manufacturers Processing Co. 50
M. & E. Mfg. Co. 115
Mearl Corporation, The 67
Metals Disintergrating Co., Inc. 36
Michigan Oven Co. 41
Miracle Paint Rejuvenator Co. 125

National Lacquer & Paint Co. 128
Naz-Dar Co. 109
New York Woodfinishers Supply Co. 119

Oakite Products, Inc. 40
O'Brien Corp., The 16
Old-North Mfg. Co. 119

Panco 105
Pelron Corp. 9
Perfection Paint & Color Co. 87
Pittsburgh Plate Glass Co. 54-55
Potter Paint Co. 8

Randolph Products Co. 101
Ransburg Electro-Coating Corp. 32
Reliance Varnish Co. 59
Rockford Varnish Co. 89
Ronci Machine Co. 117

Shell Chemical Corp. 13
Sherwin-Williams Co., The 14-15
Snyder Bros. Co. 126
Solvents & Chemicals Group, The 42-43
South Florida Test Service 128
Spe-de-Way Products Co. 116
SpeedWay Mfg. Co. 121
Spruance Co., The Gilbert 63
Stanley Chemical Co. 93
Stewart Warner Corp. 7
Sundstrand Machine Tool Co. 47

United Chromium, Inc. 95
United Machine Co. 127
U. S. Defense Bonds 131
U. S. Stoneware Co. 113

Varnish Products Co. 6
Vol-U-Meter Co. 99-130

Watson-Standard Co. 107
Wiegand Co., Edwin L. 24-25

DETREX cuts cost 80% on all-purpose cleaning operation

A manufacturer of automotive and appliance parts wanted an all-purpose metal cleaner for his spray washer . . . daily production ranged from 8,000 to 50,000 zinc and aluminum die castings, steel stampings and drawn parts. Soil varied, too . . . vegetable, mineral and pigmented drawing compounds, light and heavy oils, chips and shop dirt had to be removed depending on the part run. A clean surface on all parts was essential since brightening, plating and painting operations followed cleaning.

The Detrex field engineer recommended Detrex 92 for the job. All parts now come out of the washer thoroughly clean . . . and "92" lasts a full week. The cleaner formerly used lasted only one day. Cleaner costs are reduced 80 per cent and labor costs are lower.

Get the facts about your cleaning operations. Without obligation, have a Detrex field engineer analyze your present method or help you plan a new operation—to give you increased production and cut your costs. Remember . . . only Detrex manufactures the alkalis, emulsions, degreasing solvents *and* the equipment—everything for a *complete*, guaranteed operation. Detrex field offices are located in principal industrial cities. Phone today or write **Detrex Corporation, Box 501, Detroit 32, Michigan.**

DETREX CORPORATION

DEGREASERS • DEGREASING SOLVENTS • WASHERS
ALKALI & EMULSION CLEANERS • DRYCLEANING EQUIPMENT
PHOSPHATE COATING PROCESSES

Compact... Efficient... Automatically Controlled

GAS, STEAM OR ELECTRIC OVENS BY

KIRK AND BLUM

Your oven needs . . . large or small, batch or continuous production, for drying, baking or dehydrating . . . can be filled by KIRK & BLUM.

The small ovens illustrated are shipped completely assembled, thoroughly tested and ready to operate. Installation is a one-two process: Spot in place . . . make connections . . . and you're ready for production.

Write for booklet, "Industrial Ovens," showing typical installations.

THE KIRK & BLUM MANUFACTURING CO.
3131 Forrer Street
Cincinnati 9, Ohio

Electric laboratory type oven used by noted resistor manufacturer in making TV set components. Uniform drying heat is provided by recirculation of air provided by blower and heaters enclosed in base.